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THE CONFLICT–COOPERATION NEXUS.

POLITICISATION, SECURITY AND DOMESTIC INSTITUTIONS IN EU–RUSSIA ENERGY RELATIONS

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ABSTRACT

Over the last decade, EU–Russia gas relations have witnessed significant deterioration—the bilateral agenda has been narrowed down to *ad hoc* consultations, disputes over investment and long-term contract provisions have multiplied, and disagreements between the EU and Russia have significantly hindered the multilateral process of the Energy Charter Treaty (the ECT). This deterioration seems to be rather paradoxical in light of high gas interdependence between the EU and Russia and a rich history of well-established cooperation during the Cold War under profound ideological and strategic constraints. In addition, conflictual patterns in EU–Russia gas relations occurred in the beginning of the 2000s, during the period of high oil prices and growing global natural gas demand—the period when enhancement of cooperation would be a more expected outcome. Therefore, the core research question of the thesis addresses the puzzle: why, despite decades of cooperation during the Cold War between Western European countries and the USSR, have EU–Russia gas relations become conflictual since the 2000s?

By answering this research question, the study seeks to contribute to the analysis of institutionalisation of energy relations and to reveal factors that lead to cooperative or conflictual outcomes. So far, IR research inquiries in the field have prioritised resource and normative determinisms in addressing the success or failure of energy cooperation, which assume a geopolitical-realist struggle for energy resources and *a priori* benevolence of free markets in line with the neoliberal economic agenda respectively. The broader geopolitical approach has explained energy conflicts by structural factors of unequal resource allocation across the world and attributed a direct impact of a state resource base (an energy-rich or energy-poor state) on states' behaviour in the international arena. Another strand of the literature, 'the market approach', has also viewed problematic cooperation as a result of different interests of energy producers and consumers—but from a slightly different perspective. Limited institutionalisation of interactions has been explained by different models of gas markets producers and consumers choose. Thus, consumers favour a model of the competitive liberalised gas market (a market actor model), while producers would opt for a model of vertically-integrated monopoly and resource nationalism (a geopolitical actor model) in order to preserve control over resources.

Pointing to a number of opposite cases, this study disregards the straightforward assumption that there is a direct link between a resource base and states' strategies in the international arena. Bringing domestic conditions back to these debates, the study argues that increasing differences between the EU and Russia's domestic institutional models of the gas market have been the main factor that has triggered conflictual patterns in EU–Russia gas relations since the 2000s. These domestic institutional changes have replaced attempts to build a strategic partnership with *ad hoc* consultations at the level of practical implementation, and have triggered broader deinstitutionalisation of multilateral gas governance in Europe.

The three case studies analyse three instances of EU–Russia gas relations, tracing the crucial differences to determine the outcome—cooperation (a creation of a new or enhancement of an existing international institution), institutionalised conflict (disagreements regarding institutional settings of interactions, which are discussed and settled within the procedures of pre-existing or negotiated international institutions), or institutional conflict (expansion of disagreements beyond

the pre-existing or negotiated framework of international institutions, which are no more accepted by the parties for conflict resolution) between the parties.

The case of the EU–Russia Gas Advisory Council shows how the parties have tried to mitigate the institutional differences, invoked by institutional changes in the EU, on a consultative *ad hoc* basis. The case of adaptation of long-term contract provisions between the EU and Russia demonstrates the differences have been attempted to be alleviated within the pre-existing institutionalised context of the EU–Russia framework and international arbitration. The case of failed negotiations on the Transit Protocol to the ECT shows how differences in EU and Russia's institutional models have expanded the conflict over transit provisions beyond the existing institutionalised framework and have consequently led to further deinstitutionalisation of the ECT process.

The thesis contributes to ongoing debates about the impact of domestic institutions on actors' policy strategies in the international arena, bringing insights from energy economics, energy law, and regulatory studies to IR. It argues that differences in domestic models under conditions of high interdependence might lead to politicisation of gas market issues and broader aspects of energy governance. The study also enriches debates about energy security, arguing that energy security depends also on a stable and predictable institutional framework for interactions, which *inter alia* requires compatibility of actors' domestic models.

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Writing a PhD is not only a long and demanding exercise but also a fascinating journey into the world of academic research. When I joined the Programme in late 2010, I had little idea of what exactly my dissertation would look like. However, I always knew that my academic and professional passion—energy—would guide my research path.

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To my mother

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ABBREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
bcm	billion cubic meters
BIT	bilateral investment treaty
BP	British Petroleum
BRICS	Brazil, Russia, India, China, and South Africa
CEE	Central and Eastern Europe
CEER	Council of European Energy Regulators
CFSP	Common Foreign and Security Policy
Comecon	Council for Mutual Economic Assistance
CNPC	Chinese National Petroleum Company
DG COMP	Directorate General for Competition
DG ENER	Directorate General for Energy
DSM	Dispute Settlement Mechanism
ECT	Energy Charter Treaty
EnCT	Energy Community Treaty
EEAS	European External Action Service
EEC	European Economic Community
ENP	European Neighborhoud Policy
ENTSOG	European Network of Transmission System Operators–Gas
EP	European Partnership
ERGEG	European Regulators Group for Electricity and Gas
ERIRAS	Energy Research Institute of Russian Academy of Sciences
EU	European Union

FAS	Federal Antimonopoly Service
FTS	Federal Tariff Service
GAC	Gas Advisory Council
GTM	Gas Target Model
IEA	International Energy Agency
IEM	Internal Energy Market
IGA	inter-governmental agreement
IPE	international political economy
IR	International Relations
IOC	international oil company
JCC	Japanese Crude Cocktail
kcm	thousand cubic meters
LNG	liquefied natural gas
LTC	long-term contract
Mbtu	one thousand British Thermal Units
mcm	million cubic meters
MEGAL	Mittel-Europäische-Gasleitung
NATO	North Atlantic Treaty Organisation
NBP	National Balancing Point
NIE	New Institutional Economics
NRA	national regulatory authority
OECD	Organisation of Economic Cooperation and Development
OIES	Oxford Institute for Energy Studies
OPAL	Ostsee-Pipeline-Anbindungsleitung
OPEC	Organisation of Petroleum Exporting Countries
PA	Provisional Application

PCA	Partnership and Cooperation Agreement
REMIT	Regulation on Wholesale Energy Market Integrity and Transparency
REIO	Regional Economic Organisation Clause
RES	renewable energy sources
SPIMEX	Saint Petersburg International Mercantile Exchange
TANAP	Trans-Anatolia Pipeline
TEN	Trans-European Networks
TEP	Third Energy Package
toe	tone of oil equivalent
TOP	Take-or-Pay
TPA	Third Party Access
TSO	Transmission System Operator
TTF	Title Transfer Facility
USA	United States of America
USSR	Union of Soviet Socialist Republics
VIC	vertically-integrated company
WAG	West-Austria-Gasleitung
WTO	World Trade Organisation

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INTRODUCTION

A revival of energy-related issues in the agendas of International Relations (IR) and European Studies became apparent in the beginning of the 2000s. The issues that had previously remained predominantly the interest of specialised institutes and research centers started to be integrated into study and research programmes at many universities and research institutes as part of research inquiries in i.e. energy policy, energy security, and environmental issues related to energy.[1] To large extent, this revived attention originates from increasing political sensitivity and transformation of energy into a highly politicised aspect of international politics. Skyrocketing oil prices ended up the era of cheap oil in the early 2000s, and the world energy demand increased mostly due to the economic growth in non-OECD economies, primarily in China and India. Changing patterns in energy demand and consumption aggravated with reassessments of the liberal agenda for the 1990s and recurrence of resource nationalism across the world. A need to assess implications of these developments for international politics has become a focal point that has facilitated further incorporation of energy issues into the IR research agenda.[2]

Falling oil prices at the end of 2014 (Economist, 2014b; Hodges, 2014; IEA, 2014a) will likely not decrease scholar interest in the topic since a number of fundamental economic and

[1] For example, the Centre for Energy, Petroleum and Mineral Law and Policy at the University of Dundee (CEPMLP); Clingendael International Energy Programme (CIEP) of Clingendael Netherlands Institute of International Relations; the Energy Research Institute of the Russian Academy of Sciences (ERIRAS); Groningen Centre of Energy Law; Gubkin Russian State University of Oil and Gas; and the Oxford Institute for Energy Studies (OIES).

[2] After the 1973–1974 Oil Crisis, IR studies addressed *inter alia* the role of energy resources in international peace and stability (Deese, 1979; Ikenberry, 1986); the use of 'energy weapon' by producing countries (Mikdashi, 1974; Moran, 1981); the role of transnational oil companies and international organisations, such as the International Energy Agency (Keohane, 1978); and the correlation between resource abundance and regime developments (Ross, 1999, 2001). However, it is worthy to note that since the 2000s the problems of energy conflicts have gained closer attention in IR.

regulatory transformations are embracing international gas markets[3] towards further internationalisation. These market shifts will certainly require alleviation in form of "new political considerations as regards energy security, new market risks, and new stimuli for technological development" (Belyi & Talus, 2015a, p. 4). A need to assess institutional choices for addressing these changes has already paved the road towards further research interdisciplinarity, which brings elements of energy economics, energy law, and regulatory studies to IR. This path has been chosen, for example, by Aalto and Talus (2014) in the special issue of *Energy Policy* (Aalto, 2014; Romanova, 2014; Talus, 2014; Westphal, 2014) and by Belyi and Talus (2015b) in the recently published edited volume.

These studies have pointed to little institutionalisation of energy relations, fragility of formal institutional arrangements, and hesitance in sharing norms and practices by states. The Energy Charter Treaty—the only multilateral legally binding agreement in the hydrocarbon sector—seems to lose its importance despite recent attempts to renew the Energy Charter process.[4] Despite there is a need to address gas market transformations, little convergence of ideas and interests about how international gas markets should look like exists.

The relations between the European Union (EU) and Russia as the major players in the European gas market[5] is a revealing case of cooperation and international institutionalisation in case of high energy interdependencies. Being part of broader IR research about energy-related conflicts,

[3] The term 'international gas markets' (Hulbert & Goldthau, 2013) is used in the thesis in order to highlight regionalism of gas markets. Unlike the global oil market, gas remains a regionally traded commodity, but an increase in the share of liquefied natural gas (LNG) and growing geographical flexibility of gas trade are in place nowadays. Three main gas markets are the North American market (the Henry Hub), the Asian market (the Japanese Crude Cocktail), and the European market (a complex mix of the Continental Europe with prevalence of long-term contracts and emerging hubs within the EU Gas Target Model—among those, the most liquid is the Dutch Title Transfer Facility (TTF)—and the UK liberalized gas market with the National Balancing Point) (IGU, 2014).

[4] In 2012, Contracting Parties agreed on modernisation of the 1991 Energy Charter (ECS, 2012). The recently agreed new text of the International Energy Charter (November 2014) is due to sign at a Ministerial Conference in May 2015 (ECS, 2014). However, Italy's notification not to be a Contracting Party to the ECT in the early 2015 might indicate ongoing marginalisaion of the process (Amkan Bayno, 2015).

[5] European gas market is defined in this thesis as the market—however, largely oligopolistic—that encompasses all interactions between suppliers and consumers in Europe, including *inter alia* Algeria, the EU, Norway, Turkey, Russia and potential suppliers, such as Azerbaijan and Iran. In cases referred to the EU integration processes, the term 'EU internal gas market' is used.

energy interdependencies, and energy governance, this case highlights failures of regional energy governance, the weakening international liberal agenda of free energy markets, and increasing divergence in actors' positions despite a long history of cooperation under harsh ideological divisions.

EU–Russia Gas Relations: Setting the Scene

During 2014, the deepening crisis in Ukraine and the gas dispute between Russia and Ukraine once again attracted attention to the security of gas transit and highlighted weaknesses of energy governance in Europe. Despite some multilateral mechanisms, such as the Energy Charter Early Warning Mechanism (Rusnak & De Meyer, 2015), were offered for dispute resolution, the EU and Russia preferred to settle the dispute within *ad hoc* trilateral meetings of the EU, Russia, and Ukraine. These meetings, however, were accompanied with EU and Russia's official reciprocal accusations of inability or unwillingness to find a compromise over gas prices and transit arrangements (Farchy, Hille, Olearchyk, & Oliver, 2014; Reuters, 2014c). Just an interim six-month agreement between Russia and Ukraine was reached in October 2014,[6] and the final agreement is expected after the decisions by the Arbitration Institute of the Stockholm Chamber of Commerce (Natural Gas Europe, 2015).

Meanwhile, another large-scale gas interruption might be experienced in 2015, if the EU, Russia, and Ukraine fail to find a solution to pricing and transit aspects. The consequences of such interruption for EU–Russia gas relations might be harsher than those of the Russia–Ukraine gas crises of 2006 and 2009, when 22 days of interruptions "overbalanced previous 40+ [years] (since 1968) of stable and non-interruptible supplies" by Russia (Konoplyanik, 2014d); even if now the EU is better prepared for such interruptions than was in 2009 (Behrens & Wieczorkiewicz, 2014; European Commission, 2014b).

[6] Accordingly, 5 bcm should be supplied at $378 ($100/kcm discount only for following six months) and $3.1 bn of debt should be paid by Ukraine by the end of 2014 (RT, 2014).

In the end of 2014, it would not be an exaggeration to argue that EU–Russia gas relations are approaching their lowest point. The European Commission blocked the construction of South Stream (BBC, 2014a) and introduced the package of sanctions *inter alia* against Russian oil and gas sectors (Council of the EU, 2014). Russia signed the gas contract with Chinese National Petroleum Company (CNPC) in May 2014 in order to overcome excessive gas export dependence on Europe (Miller, 2014b; Topalov, 2014), and rather unexpectedly renounced South Stream in December 2014 (Novosti, 2014). Triggered by broader political clashes regarding the situation in Ukraine, these conflicts over gas transit through Ukraine and the gas pricing mechanism[7] are, however, not something new and unexpected, and signal in an extreme form the overall deterioration of both the bilateral EU–Russia framework and multilateral energy governance in Europe. During the last decade, the EU–Russia gas agenda was continuously marked with a degradation of EU–Russia formal frameworks. The Energy Dialogue, launched in 2000 "as a forum for resolving problems related to market access" (Modernisation, 2012, p. 4), has been focusing mostly on technical issues; a new Partnership and Cooperation Agreement (PCA) has being pending, partially because of unresolved energy issues (Konoplyanik, 2009a).

Disputes between the EU and Russia over nearly all issues of the gas market demonstrate a lack of the EU–Russia common position, incompatibility of their rules, and increasing weakening of gas governance arrangements. One of the most demonstrative examples is the launch of an anti-trust investigation by the European Commission in September 2012 against Gazprom's alleged infringements of EU competition law. Gazprom was accused of impeding competition in CEE gas markets and abusing its dominant market position. The company was suspected of three anti-competitive practices—division of Central and Eastern European (CEE) markets by "hindering the free flow of gas across Member States", prevention of diversification of supplies, and imposition of unfair prices on its customers "by linking the price of gas to oil prices" (Commission, 2012).

[7] See Glossary.

The aim of this investigation—to establish whether upstream long-term contracts (LTCs)[8] between EU wholesalers and external suppliers, such as Gazprom, are consistent with EU competition law—is not completely new in the EU–Russia agenda. During previous years, several clauses of upstream LTCs, such as the destination clause and the Take-or-Pay (TOP) clause, have been subject to tense renegotiations between the EU and Russia (Talus, 2011a, pp. 277-288). However, this time, the dispute was rapidly upgraded from a legal (at least formally) case to a political dispute: the scope and intensity of the Commission's procedure was immediately mirrored in the decree of the President of Russia to protect Russia's "strategic companies" (Decree, 2012). Postponed during the second half of 2014, the investigation was re-launched in Spring 2015 (Euractiv, 2014; European Commission, 2015a).

Modifications of the gas pricing mechanism in gas commodity contracts is another issue that has invoked serious debates between Russia and the European Commission. Advocating the principles of market liberalisation, supported to a certain extent by "the first signs of global gas prices based on *actual* gas fundamentals" (Hulbert & Goldthau, 2013, p. 98), the European Commission contends to replace the oil indexation with hub pricing. Russia, in turn, resists these changes since they entail shifts in price formation from energy companies to traders.

Another example of tensions between the EU and Russia concerned the regulatory status of South Stream. Inability of Russia and the Commission to agree on whether the project should comply with or should be exempted from the Third Party Access (TPA) of the Third Energy Package (TEP)[9] resulted in cancellation of the project by Russia in December 2014. The disagreements primarily concerned the amendments of the intergovernmental agreements between Russia and those Member States, on whose territories the pipeline was to be built, in accordance with EU legislation (EurActiv, 2013; Natural Gas Europe, 2014b). Expecting to settle the issue of the TPA exemption later, Russia was ready to start the construction of the offshore part of South

[8] In details, gas commodity contracts and gas pricing are discussed in Chapter 4.

[9] For further details about the TPA exemption in the TEP, see Chapter 4 and Glossary.

Stream. However, after the conflict between the EU and Russia over the situation in Ukraine rapidly expanded to the gas sector, South Stream came under serious scrutiny by the EU.

These problems around South Stream are closely related to failures of gas transit arrangements in Europe. The effective functioning of the Energy Charter Treaty (ECT), a multilateral international treaty aimed to establish single rules of trade, transit, and investment protection in energy, has been "somewhat hindered by a deadlock through EU–Russian political contradictions over the Transit Protocol" (Belyi, 2014b, p. 320; Encke & Bonafe, 2014). The major disagreements between the EU and Russia, the key actors in this multilateral process, concerned the Draft of the Transit Protocol to the ECT (Belyi, 2012a, p. 16). Thus, the EU proposed to exclude gas flows through its territory from the ECT transit provisions[10] on the grounds of the proposed Regional Economic International Organisation (REIO) clause to the Draft of the Transit Protocol, and Russia requested clarifications of the Art. 7 on transit before ratification of the ECT.

Dissatisfaction with the semi-failed negotiations on the ECT affected the parties' preferences: the EU focused on export of the EU gas market design to the neighborhoud within the Energy Community Treaty; and Russia, in turn, proposed a Draft Convention on Energy Security to replace the ECT and finally terminated the ECT provisional application in 2009 (Belyi, 2014b; Belyi, Nappert, & Pogoretskyy, 2011; Konoplyanik, 2012a). Dysfunctionality of gas transit governance in Europe culminated into several highly politicised conflicts between Russia and transit states. The infamous gas interruptions to the EU and Ukraine in 2006 and 2009 during the disputes between Russia and Ukraine seriously damaged Russia's reputation as a reliable supplier and fuelled academic and policy-oriented discussions about EU energy security (Baran, 2007; Gnedina & Emerson, 2009; Smith, 2006; Westphal, 2009).

Moreover, a number of investment disputes, triggered by unbundling measures introduced by the TEP in 2009, have further complicated EU–Russia gas relations. In case the company does not meet criteria of the Third Country Clause, which was "referred to in the press as the "Lex

[10] Since 2003, according to EU law, there is no intra-EU gas transit.

Gazprom" (Boussena & Locatelli, 2013, p. 32), obligatory selling of its transmission and distribution assets in the EU downstream might be required. This Clause was largely defined by Russian officials as hostile to Russia (Rettman, 2011), and Russian Minister of Foreign Affairs Sergey Lavrov (2013, p. 8) pointed to "*de facto* expropriation of Russian companies". Disputes about Gazprom's share in *Lietuvos Dujos*, a Lithuanian gas company, have symbolised the emerging conflict about organisation of the gas sector. Since Lithuania applied the most radical type of unbundling, the ownership one, Gazprom sold its shares after being fined for infringement of EU antitrust rules (Sytas, 2014). This case also invokes numerous questions about the interrelationships between EU energy *acquis* and international law, about prevalence of EU law over bilateral investment treaties (BITs) and the ECT in disputes over investment protection.

This politicisation of gas relations since the 2000s reveals a significant and rather unexpected change of directions vis-à-vis past EU–Russia gas relations and looks very perplexing. Numerous tensions are quite puzzling due to a high level of interdependence between the EU and Russia in the European gas market. From Russia, the EU receives 40 per cent of its natural gas imports, and certain EU Member States depend on Russia nearly for 100 per cent (ACER, 2014b, p. 170). In 2013, the dependence of Estonia, Finland, Latvia, and Lithuania reached 100 per cent; that of Bulgaria and Slovakia over 90 per cent; that of Austria, the Czech Republic, Hungary, Greece, and Slovenia of over 60 per cent; and that of Poland slightly below 60 per cent (ibid). At the same time, Russia's revenues from oil and gas exports have reached up "more than a quarter of Russia's gross domestic product (GDP), and amounted to a third of the national budget" (Mitrova, 2014, p. 6).

In addition, specificity of the gas industry—its primary reliance on lengthy and costly fixed infrastructures (Bressand, 2013)—makes interdependence between a gas producer and a consumer

much higher than, for example, the oil and coal trade.[11] Russia, one of three top gas producers, and the EU, one of the leading gas net importers, are interlocked by infrastructures, which are impossible to move and very expensive to replace or duplicate. Notwithstanding since the second half of the 2000s both parties have been looking for alternatives, including those of liquefied natural gas (LNG) and US unconventional (shale) gas, Russia's share in gas supplies to Europe will remain irreplaceable at least in the mid-term (Hulbert & Goldthau, 2013; Stern, 2014c, pp. 54-55; Stern et al., 2014). Moreover, according to many prognoses, notwithstanding the economic decline in the EU due to the economic crisis in the late 2000s, defined as "the steepest downturn on record since the 1930s" (Commission, 2010, p. 9), the EU dependence on energy imports is likely to grow. Although not as fast as was predicted before the economic crisis of 2008, EU natural gas imports are estimated to grow by 40 per cent in comparison to 2005 by 2030 (Commission, 2010, p. 30).

This empirical observation raises the question of why the EU and Russia, enjoying a high level of interdependence, have opted for a gradual self-exclusion from multilateral initiatives, such as the ECT, and have failed to agree on a bilateral framework for energy cooperation. Energy, despite being one of the major issues in EU–Russia relations, was only "scarcely mentioned" in the PCA, the cornerstone document for the EU and Russia (Romanova, 2012, p. 30).

This is even more paradoxical since the gas trade in Europe was historically considered a kind of 'special' relations between Western European countries and the USSR. Starting with the first supplies to Austria in 1968, the gas trade was the area that cemented these relations under the serious ideological divisions and provided reciprocal benefits—energy supplies, alternative to those from the Middle East, for Europe and hard currency for the USSR. During the Cold War, cooperation in the gas trade between Western European countries and the USSR had not been stopped even by US pressures on its European allies to terminate their cooperation with the USSR in the energy and technology domains (Hogselius, 2013).

[11] This specificity remains a trait characteristics of the gas industry; however, technological developments in gas transportation, such as progress in LNG technologies and developments in virtual gas pipelines across the world (ACER, 2014d), increase flexibility of the traditionally infrastructure-dependent gas industry.

Instead, the parties launched a number of large-scale infrastructure projects from scratch and developed a rather sophisticated 'system' of reciprocal help in order to complete these projects—European pipes, technologies, and equipment were bartered for Soviet oil and gas. "[A]n extensive East–West natural gas system at odds with Europe's formal political, military, and ideological divisions" tied the parties in the long-term relations and created certain atmosphere of trust (Hogselius, 2013, p. 4). The early 1990s proved the strength of these ties: even the economic collapse and institutional re-organisation in the post-Soviet Russia did not cause either interruptions of gas supplies or infringements of LTCs' commitments by Russia.

Therefore, one could have expected that if these relations survived and progressed under serious ideological constrains, they would flourish after the end of the Cold War. As Haukkala (2011, p. 1) points, "the enthusiastic and optimistic mood at the immediate aftermath of the Cold War" witnessed numerous positive expectations about future cooperation between Russia, the successor of the USSR, and the EU, reinforced by the Maastricht Treaty, and energy issues were viewed as indispensable part of this broader cooperative framework. However, this did not happen. As Belyi (2014b, p. 321) underlines, "quite paradoxically, the Cold War context has been reflected by positive interdependency in energy trade relations and resulted in the conclusion of an overarching governance mechanism of the ECT. … However, from the 1990s until at least the second decade of the twenty-first century, negative interdependence predominated gas trade relations". This negative trend was not overcome even by a need to adjust transit provisions in Europe in order to secure transit after newly independent states of ex-USSR and Eastern Europe arose between Western European consumers and Russia (Hogselius, 2013).

Many scholars have noticed these paradoxical changes, which show "an excessively gloomy picture of relations between the EU and Russia" despite the fact that "given the difference in gas resources between Russia and the EU, the gas trade should normally develop in the mutual interest of these economies" (Finon & Locatelli, 2008, pp. 423-424). Aalto (2007, p. 204) stresses "[t]he greatest discontinuities … between the EU and Russia, who paradoxically at the same time

represent the highest potential for a mutually compatible major energy relationship"; and Boussena and Locatelli (2013, p. 180) mark a "persistent lack of understanding between the two parties" about institutional organisation of the European gas market.

Perplexity about EU–Russia gas relations is further reinforced by the fact that the share of Russian gas supplies to the EU has been gradually decreasing in comparison to its level of 1991, even in spite of several EU Enlargements. Particularly, in 2004, several Eastern European countries with high shares of Russian gas in their energy mixes joined the EU. As Casier (2011, p. 505) notices, "while European dependence on Russian energy is lower today than it was in the early 1990s, we have moved from a predominantly economic understanding of EU–Russia energy relations to one in terms of a power struggle, geopolitical competition and security".

This transformation of gas relations is even more puzzling when compared with Russia's oil and coal supplies to the EU: both account for nearly the same percentage as those of natural gas—approximately 30 per cent each—but have never witnessed such politicised tensions. The same concerns gas supplies from Algeria and Norway. They account for a similar percentage of Russia's gas supplies, but have never undergone such extreme politicisation as those between the EU and Russia.

These observations raise the crucial question, *why, despite decades of cooperation during the Cold War between Western European countries and the USSR, have EU–Russia gas relations become conflictual since the 2000s?*

The explanation of these apparently unanticipated changes in EU–Russia gas relations is the principal aim of this study. In more theoretical terms, the study addresses the question of which factors facilitate energy conflicts and inhibit international institutionalisation.

Institutional Models of the Gas Market and EU–Russia Gas Relations

This study argues for a special role of domestic institutions in explaining problems of international institutionalisation. Relying on the new institutionalist literature, the thesis claims that domestic institutional models may affect states' policy actions in the international arena. EU–Russia gas relations and variations in their outcomes (cooperation or conflict) are a valuable and revealing case of the impact of domestic institutional models on international institutionalisation.

The study derives from empirical observations that despite some attempts to fill in a certain post-Cold War 'regulatory vacuum' within *inter alia* the ECT process and the EU–Russia Energy Dialogue, EU–Russia gas relations have witnessed steady conflictual patterns since the 2000s. At the same time, strategic rivalry and sharp ideological divergences did not inhibit Western European countries (the EU) and the USSR (Russia) to commit to the construction from scratch of extremely costly gas infrastructures, to elaborate a complex web of norms and practices, and to launch gas supplies which were not interrupted even during the post-Soviet political and economic turmoil.

The thesis looks at the case of EU–Russia gas relations as a valuable reflection of broader questions about failures of energy multilateral governance and sources of conflictual patterns in energy relations. By far, energy conflicts and a lack of international cooperation have been mostly attributed to inconsistencies produced by structural factors, such as unequal allocation of energy resources and states' competitive aspirations to get access to or to use resources for foreign policy goals. Sharp and inevitable differences in interests of energy producers and consumers have been assumed and served as an explanation of energy conflicts and problems experienced in multilateral institutionalisation. Structural factors as an explanation of competition between consumers and producers have been the cornerstone of the geopolitical approach. Offering a parsimonious explanation of energy conflicts, this approach has prioritised the physical dimension of energy security. Secure access to transport routes and resources, and control over them have been treated as the first-hand strategic interests of both producers and consumers, and little interest was attributed to the role of multilateral institutionalised frameworks in enhancement of energy security.

Another strand of the literature, the so-called 'market approach' within the neoliberal paradigm, has also viewed problematic cooperation and institutionalisation in gas markets as an outcome of incompatible interests of energy producers and consumers, but from a slightly different perspective. Thus, failures in energy governance have been explained by different models of gas markets inherited in presence or absence of energy reserves and states' domestic regimes. Accordingly, consumers are argued to inevitably favour a model of a liberalised gas market in line with the Washington Consensus provisions (the market actor model) in order to get access to resources and mitigate their energy dependence; while producers opt for a model of a vertically-integrated monopoly in line with resource nationalism policies (the geopolitical actor model) in order to secure control over resources and guarantee revenues from energy export, the so-called resource rent.

Despite the parsimony of these approaches, a link between a resource base and a state's policy action in the international arena is not so simple and direct—empirically, a number of opposite cases do not confirm this near-causal assumption, which has guided the IR research agenda. "[C]an we argue that interests of energy-producing states are inherently in conflict with those which import energy?", ask Belyi and Talus (2015a, p. 1) in the recent volume about state–market relations in the hydrocarbon sector.

The comparison of contract structures and market organisation in various states across the world shows that patterns are far more complicated than a link between presence or absence of energy resources in a state and a state's choice for a particular external strategy. Liberalised gas markets with gas-to-gas competition are well-developed in such producing states, as the Netherlands, the UK, and the USA,[12] (KEMA & in collaboration with COWI, 2013). Norway, a large gas supplier to the EU, is also increasingly incorporating most EU energy *acquis,* including competition provisions, and is gradually switching to hub pricing (European Commission, 2014c; Marbo & Wybrew-Bond, 1999). At the same time, regional monopolies, reliance on LTCs, and a

[12] The USA has become a net gas producer predominantly since the 2008 shale gas developments.

high level of state involvement are features of gas markets in such importing states as China and Japan (KEMA & in collaboration with COWI, 2013). Overall, these empirical cases discourage the straightforward assumption advocated in the IR studies that "energy producers tend to state capitalism, while energy consumers favour a market oriented approach" (Belyi & Talus, 2015a, p. 12).

The cases of the EU and Russia also contribute to this argument—initially, "the institutional architecture of the gas markets of the EU and the Soviet Union, based on vertically integrated monopolies that organised the buying and selling of natural gas" was very compatible (Boussena & Locatelli, 2013, p. 182). Only later, during the 1990s, the EU opted for liberalisation of gas markets according to the Anglo-Saxon model, which had been already implemented in the UK, while Russia preserved and enhanced state monopoly (ECS, 2007). Trends towards partial liberalisation in Russia's gas sector since 2009 (Belyi, 2013b) also dismiss the argument that energy-rich states attempt to preserve the model of state control and public intervention at any costs because only this model can promote and protect their interests in the international arena.

Grounding its line of reasoning in these empirical observations, supported by the research about various regulatory choices for the gas market in energy producing states, such as Australia (Vivoda, 2015), Mexico and Venezuela (Rousseau, 2015), and the USA (Sovacool, 2011); and energy importing states, such as China (Andrews-Speed, 2015) and Japan (Vivoda, 2015), this thesis seeks to challenge the claim that producers and consumers have *a priori* different interests which inhibit bilateral and multilateral institutionalisation of their energy relations.

Therefore, arguing that there is no direct link between the resource base and states' failures to cooperate, the thesis explains difficulties in international institutionalisation as an outcome of divergences in states' domestic institutional models of the gas market (Correlje, Groenleer, & Veldman, 2013; Glachant, Hallack, & Vazquez, 2014), an institutional choice that is not strictly linked to the presence or absence of energy resources in a country. By this, the study positions itself in the research thread endorsed by Boussena and Locatelli (2010, 2013); Rossiaud, Locatelli, and in

cooperation with Loskot-Strachota (2012), Kuzemko, Belyi, Goldthau, and Keating (2012), and Belyi and Talus (2015b). Overall, arguing that domestic institutional structures do matter, these studies have focused on "the institutional causes for energy transition in time and in space", which "are related to the nature of the interaction between the state and the market and … are not linked in a linear fashion to the structural issues of reserve distribution or supply and demand levels" (Belyi & Talus, 2015a, p. 1).

On these grounds, the study aims to broaden the scope of theoretical debates: it does not assume a direct causal link between different interests of consumers and producers and their consequent failures to cooperate and offers a more nuanced analysis of institutionalisation of interactions in energy markets. It points to the importance of domestic institutional settings of gas markets, such as "the conception of the role played by the state in the market, the conception of national control over resources, and regional perceptions of threat and path dependencies" (Belyi & Talus, 2015a, p. 5).

Bringing back institutional factors to energy relations, this study also steps away from viewing energy relations exclusively as a struggle for control over resources and transportation routes, and brings insights to a struggle over the possibility to define the rules of the game in energy markets. In other words, without underestimating the importance of physical availability of resources (security of supply) and predictable and stable demand for them (security of demand), the thesis contends that states do care also about rules and norms that structure their interactions, about certain *modus operandi* for energy markets (Talus, 2011a, p. 268). By this, states' domestic institutional models encompass not only different economic interests of various domestic stakeholders, but also political considerations, and might represent states' benchmarks for organisation of international institutions.

Empirically, this study argues that changes in EU–Russia gas relations since the 2000s have been triggered by increasing differences between their domestic institutional models of the gas market. While Russia has been reinforcing its state-controlled gas monopoly, the EU integrationist

initiatives have focused on the creation of the EU Internal Gas Market by means of enhancement of competition in the historically vertically-integrated gas sector and on mitigation of differences in gas sectors of member states.

In addition, domestic developments in Russia provide evidence for challenging the argument that resource nationalism is *a priori* the only choice for resource-rich gas exporting countries. Since 2009, Russia's gas sector dynamics has witnessed certain trends towards decentralisation and limited liberalisation (Belyi, 2013b). First, LNG export monopoly was removed in 2014 in order to boost domestic competition between Gazprom and the so-called 'independent gas producers', such as state oil major Rosneft and privately-owned Novatek (Hille, 2013). Second, lifting Gazprom's pipeline gas export monopoly is widely and openly discussed—a case hard to imagine even a couple of years ago (Belyi & Goldthau, 2015; Papchenkova & Serov, 2014; Stern, 2014b, p. 46).

Developments in the EU gas market also point to shortcomings of normative determinism and shed light on "a misleading belief in the 'invisible hand of the markets" (Belyi & Talus, 2015a, p. 3). Increasing public intervention to the gas markets of member states and strengthening of the strategic dimension of EU external energy policy by EU supranational institutions challenge both the widespread conceptualisation of the EU as a 'market actor' in line with the neoliberal economic agenda and various approaches that stress normativity in EU actorness, such as the Normative Power Europe (Manners, 2002). Contrary, empirical data demonstrate that the EU model is a sophisticated endeavour to promote the EU regulatory choice, an evolving complex combination of liberalisation and regulation, across EU borders to the neighborhoud.

Moreover, both models represent a 'point of reference' and a 'baseline level' for the EU and Russia in their interactions. Both also prioritise 'domestic' sources of law over international ones—the EU claims EU energy *acquis* shall be considered the standard in the European gas market, while Russia defends the priority of bilateral intergovernmental agreements with the prevalence of national law; and both the EU and Russia progressively distance multilateralism (Belyi, 2014b; Boussena & Locatelli, 2013; Konoplyanik, 2009a). Tensions between the European Commission

and Russia indicate emerging competition over law that shall be applied for the European gas market. They raise debates whether EU law has prevalence over international law provisions and over those intergovernmental agreements which were signed before EU law made applicable to the territory of some member states and/or certain provisions of EU law came into force.

It is argued that the divergences in the EU and Russia's models have limited attempts to build a strategic partnership to *ad hoc* consultations, designed to mitigate differences at the level of practical implementation, and have triggered broader deinstitutionalisation of multilateral gas governance in Europe.

Contribution to the Literature: Theoretical and Empirical Relevance

The thesis offers a conceptual framework for analysing cooperative–conflictual patterns in gas relations and the impact different institutional models might have on international institutionalisation and politicisation of gas issues. Despite its prominence, this argument, however, has been barely theoretically or empirically investigated. Given increased interconnectedness between domestic and international levels, this study reinforces research interdisciplinarity, bringing insights from energy law, energy economics, and regulatory studies to IR. It also argues for importance of domestic institutional factors in de-institutionalisation processes at the international level. In the view defended in this thesis, an institutional approach, taking into account both domestic and international levels, allows to avoid deterministic assumptions which have been propelled in IR energy studies so far.

Despite its parsimony, resource and normative determinism needs to be avoided because it views *a priori* different interests of producers and consumers as a source of energy conflicts and obstacles for energy governance—differences, often not confirmed empirically. The role of energy resources in actors' strategic choices has been over exaggerated; the 'market *vs.* geopolitics' debates have assumed that energy consumers are better off with the model of the liberalised gas market, and

producers—with the model of the vertically-integrated market. Without doubts, presence or absence of energy resources does matter and might have serious implications for a regime, an economy, and general policy guidelines, but it should not be granted a sole responsibility for emerging disparities between actors. In addition, the study attempts to bridge political and commercial components in energy, pointing that institutional models consolidate economic and political interests of actors and serve as benchmarks for international governance arrangements. The success or failure of international institutionalisation would depend on whether actors find these arrangements consistent with their domestic models.

However, institutional developments of the EU and Russia's models have been largely neglected or addressed insufficiently: many studies have stayed in normative traps of assuming a benevolent nature of the EU and have attributed conflicts and limited institutionalisation of relations to deviation of producers from free markets. These 'normative stances' also seem to have dominated studies about the EU gas market model—many studies have implicitly (and sometimes explicitly) assumed the model of the liberalised market to be the only right model for energy markets and viewed "market-oriented governance structures … [as] a *fait accompli*" (Keating, Kuzemko, Belyi, & Goldthau, 2012, p. 3).

Moreover, the discussion of the EU energy actorness has transformed into a kind of sterile debates about a sharp division between norms and interests, explicitly or implicitly assumed—the thesis largely consistent with variations of the Normative Power Europe concept (Manners, 2002). Conceptualisation of the EU as a market actor has remained rather ambiguous: it has been often left unclear whether a 'market' actor is the one that guides its policy choices exclusively by the *laissez-faire* principle, or whether it is the one that promotes a certain model of the gas market, which is based on a complex web of principles of market liberalisation and the gradual reallocation of regulatory competences from the national to the supranational level. The proper understanding of the EU as a *market* actor *per se* has been largely left out of these debates and has been based on an unspoken benevolence of liberalisation of the EU gas market—without much investigating the

implications of the EU regulatory choice. Moreover, normativity of the EU actorness has been increasingly questioned by numerous concessions of democracy and human rights issues by the EU in relations with energy suppliers and by growing penetration of security considerations into the institutional design of the EU internal gas market (Talus, 2015; Youngs, 2009).

Even within the liberal agenda, domestic intricacies reflect broader differences in gas market models—for example, despite its reliance on the US gas market model, the EU Gas Target Model adapts the Anglo-Saxon gas market model to EU domestic realities (Ascari, 2013; Glachant, 2013; Talus, 2014). To some extent, recent publications in the IPE seek to fill this gap addressing differences in governance arrangements of various domestic gas markets (Belyi & Talus, 2015b; Fernandez & Palazuelos, 2014; Keating et al., 2012).

The thesis also contributes to research about power in energy relations. Despite bringing pipeline politics and power considerations back to IR and European Studies coupled with new insights from political economy, energy economics and the gas industry, the major flaw of this literature has remained a tendency to equal power to energy resources in a rather straightforward manner. Despite the complexity of multifaceted energy security (Dannreuter, 2015), IR debates about power in energy relations shortly drifted towards various empirical examinations whether and to what extent states can use energy resources as *ultimo ratio* in international politics. Flourished after a wave of resource nationalisation in the Middle East and the Oil Crisis of 1973–1974, the scholarship majorly focused on the implications of the ownership of resources and infrastructures by energy producing states for energy security of energy consuming states. By this, debates about energy security were narrowed down to "security of international oil supplies" within the traditional realist-inspired agenda (Dannreuter, 2015, p. 3).

These debates have resulted in various policy-oriented concepts, such as *Energy Superpower* (Lelli, 2009) and *Energy Weapon* (Smith Stegen, 2011), which have viewed access to and control over resources as a necessary and sufficient condition for exerting power. While this mechanism of transposition of resources into power has rarely been addressed explicitly, physical actions over

energy resources—cuts or reductions of supplies by producing states and a refuse to purchase resources by means of embargos and sanctions by consuming states—have been assumed as a way power is expressed (Van de Graaf, 2013; Kazantsev, 2008; Newnham, 2011).

Overall, transposition of resource possession into power—an ability of A to force B to do what B otherwise would not do, famously defined by Dahl (1957, pp. 202-203)—has been often taken for granted as the only way power can be exerted in the energy domain. Paraphrasing Barnett and Duvall (2005b, p. 8), in the analysis of energy power, "[y]et the realist approach remains the industry standard". This 'industry standard' of IR energy studies is broadly referred to as *Energy Power (Weapon)* throughout the text and is understood as an amalgamation of various concepts and notions that refer to energy resources as a critical component of power relations between producing and consuming states.

It is argued that *Energy Power (Weapon)* is limited not only because of the lack of theoretical and methodological consistency—it can be applied only to a limited number of cases under certain conditions—but also because of its narrow understanding of power. An important clarification is needed to avoid analytical confusions between *Energy Power (Weapon)* as compulsory power in energy and as perceptions and self-perceptions of being *Energy Power (Weapon)*, two concepts that have been continuously misleadingly mixed. Self-perceptions of various energy-rich states as Russia to be *Energy Power* (Feklyunina, 2012) and consumers' perceptions that a particular supplier represents a threat, such as the process of securitisation of Russian gas supplies by the EU (Natorski & Herranz Surralés, 2008), should be distilled from an actual ability of actors to affect each other. Additionally, actor's self-perceptions of being *Energy Power (Weapon)* may incline the actor to disregard in its strategies other ways power can be transposed in energy relations.

Based on studies by Barnett and Duvall (2005a), this study provides insights into institutional power in energy relations—relations between specific actors in regards to a design of

international institutions and rules that allows one actor to execute indirect control over another and create long-term advantages of the former vis-à-vis the latter.

This study also broadens the scope of discussion about energy security. Without dismissing a wide range of studies about physical aspects of energy security, *inter alia* infrastructure security (Umbach & Nerlich, 2011), security of supplies (Maloney, 2010; Shaffer, 2013), and diversification (Vivoda, 2009), this study affirms that energy security is also about a predictable and well-developed institutional structure. Bringing back the institutional dimension of energy security, the study underlines the importance of a predictable institutional framework for a proper functioning of gas markets. The absence or weakening of such framework may lead to increasing politicisation of issues. Energy security, including its transit dimension, also depends on "the institutional system and the regulatory framework of natural gas both within the EU and in its relations with Russia" and on "progress in the institutionalisation of EU–Russia energy relations" (Losoncz, 2009, p. 141). By this, the study aims to overcome the dominance of studies about pipeline politics and EU energy diversification strategies, which have crowned the analysis of EU–Russia gas relations since the 2006 Russia–Ukraine gas dispute, and which are likely to flourish after the 2014 Ukrainian crisis

In addition, this research contributes to studies about gas issues in IR. Paraphrasing David Baldwin (1997), studies about energy in IR are more a 'cottage industry'—a bright patchwork of concepts and policy advising about energy security with few attempts of systematisation, such as those by Güllner (2008) and McGowan (2008). Most part of the literature applies rather vague frameworks of 'energy policy' and 'energy relations', particularly, in the analysis of EU–Russia relations. The thesis points that the specificity of the gas industry and differences between oil and gas markets (which, however, might decrease and even disappear in the long term with the developments in gas markets)[13] affect energy relations significantly, but are rarely explicitly acknowledged in the IR literature (Shaffer, 2009).

[13] These ongoing changes are discussed in Chapter 3.

Methodologically, the study aims at elaborating a set of indicators to operationalise how domestic institutional models may affect actors' policy strategies internationally and facilitate creation or deterioration of international institutions. It maps out indicators for tracing the impact of the EU and Russia's institutional models of the gas market on EU–Russia gas relations and on a broader gas governance framework in Europe, filling the gap in studies about correlation between domestic institutional models and conflictual patterns in the international arena.

This research is conducted by means of a single case study research design (George & Bennet, 2005), which provokes a number of methodological challenges, discussed in details in the chapter about the research design, but which also offers fruitful results. Within the single case of EU–Russia gas relations, the impact of the EU and Russia's domestic models on their policy strategies is analysed. It is examined whether a set of indicators can be devised to explain how domestic institutions trigger conflict or promote cooperation. In order to do it, the three within-case studies are organised according to three outcomes of relations— cooperation (a creation of a new or enhancement of an existing international institution); institutionalised conflict (disagreements regarding institutional settings for interactions, which are discussed and settled within the procedures of pre-existing or negotiated international institutions); or institutional conflict (expansion of disagreements beyond the pre-existing or negotiated framework of international institutions, which are no more accepted by the parties for conflict resolution and negotiations). Process-tracing is employed to detect "the causal chain and causal mechanisms" (George & Bennet, 2005, p. 206) between domestic institutional models of the gas market and outcomes in EU–Russia gas relations.

Focusing on the EU model, which is still a 'work-in-progress', and putting aside bilateral relations between member states and Russia is a deliberate methodological choice that proves to be fruitful for the purposes of answering the main research question. Despite the EU Internal Gas Market is far from being completed and institutional differences between member states still remain the matter of concern within the EU, empirical observations support the argument that the EU

supranational model of the gas market has increasingly becoming *modus operandi* both internally, within the EU, and externally, in relations of the EU with external actors. Major directions of gas market developments have been set up in the recently updated Gas Target Model (ACER, 2015; CEER, 2011), and elaboration of the Network Codes, technical and regulatory provisions for a single wholesale gas market, is under completion in close cooperation among the Agency for the Cooperation of Energy Regulators (ACER), national regulatory authorities (NRAs), and the European Commission (ACER, 2014a, 2014c; CEER, 2014a, 2014b; Posaner, 2014).

This study also underlines methodological inconsistencies that have flourished in research inquiries about EU–Russia relations. EU–Russia energy relations have been conceptualised as a mix of issues at different levels, including bilateral projects of Russia and member states, political dialogues, climate change policies, and legal disputes. Many studies have also discussed 'energy relations' in general, leaving aside particularities of gas markets and market transformations as important aspects of EU–Russia gas relations. This mix has inevitably contributed to certain inconsistencies and incoherence in the field.

The analysis is based on primary and secondary sources in English and Russian both in the EU and Russia available online or in open sources. To cross-check information, semi-structured interviews were performed in Moscow and Brussels during 2012–2014, as well as a number of conversations were conducted occasionally during various conferences and workshops in order to obtain additional information.

Empirical implications of this study are following. *First of all*, the thesis analyses the failure of cooperation between EU and Russia in the gas market—an issue that has proved to be complex both in academic and policy-oriented studies. The study argues that increasing institutional inconsistencies between two institutional models have facilitated politicisation of gas relations, and mitigation of these changes is a crucial step towards their depoliticisation. Domestic developments in the EU and Russia's hydrocarbon sectors during the 2000s transformed energy into a highly politicised aspect of both EU–Russia relations and EU internal policy-making. Thus, during the

1990s, both the multilateral process of the ECT and negotiations of the EU–Russia PCA were generally consistent with the EU-backed liberal framework, and the overall *modus operandi* of the gas trade in Europe remained largely undisputed.

Institutional differences in gas market structures began to emerge between the EU and Russia in the 2000s: in Russia, reinforcement of state control became particularly apparent in the hydrocarbon sector; and in the EU, the Anglo-Saxon neoliberal model for the vertically-integrated network industries of gas and electricity, an agenda rather new to the Continental Europe, gradually developed into a new doctrine for the EU Internal Energy Market. The differences were further aggravated with the intricate gas crises between Ukraine and Russia in 2006 and 2009, and with the 2004 Enlargement. The latter made the historical legacies of the Central and Eastern European gas markets part of the EU political and regulatory landscape and, as a result, an issue for inevitable deliberations with Russia. A complex combination of these events fuelled unprecedented politicisation of energy, especially gas-related, issues in Europe. Since then, the scholarship has consistently engaged in the debates about the *momentum* for an EU common energy policy and emergence of its strategic dimension, and about geopolitically-motivated alterations in Russia's energy policy-making.

So far, academic debates have predominantly focused on three broad areas of analysis. *First*, scholars have been interested in whether and to what extent the EU and Russia have managed to institutionalise their relations, approximate or harmonise their regulatory frameworks and create a common energy space, arguably well-needed under high interdependence (Hadfield, 2008; Leal-Arcas, 2009; Padgett, 2011; Romanova, 2012, 2014). Issues under discussion have included *inter alia* the EU–Russia Energy Dialogue (Romanova, 2008); intricacies of EU–Russia energy interdependence (Proedrou, 2007); and participation of the EU and Russia in multilateral initiatives (Hadfield & Amkhan-Bayno, 2013).

Confirmed by most scholars, increasing inconsistencies in EU–Russia gas relations have been, however, attributed to various explanations. First, the scholarship has followed the general

trend in IR to explain energy conflicts as *bellum omnium contra omnes* as a result of the unequal allocation of resources across the world and competition between energy producers and consumers for them (Umbach, 2011). Second, studies have consistently treated politicisation of EU–Russia gas relations as a result of Russia's deviation from the liberal model of energy markets towards progressing resource nationalism (Newnham, 2011). Third, ideational factors as explanatory variables have also acquired prominent positions in academic debates: a lack of trust between the EU and Russia (Ziegler, 2013), their different visions of energy cooperation (Casier, 2011), normative orders (Haukkala, 2014), ideas about the organisation of energy markets (Kuzemko, 2014), and energy discourses (Kratochvil & Tichy, 2013) have been argued to explain deterioration of the EU–Russia relations.

The *second* aspect the scholarship has sought to address is the impact of EU integration on EU relations with other actors, and, reversely, the impact of external events on EU integration process. Deepening of EU gas markets' integration and *communitarisation* of national energy policies have been largely studied in line with the supranational–intergovernmental debates (Birchfield & Duffield, 2011; Eikeland, 2011b; Matláry, 1997), with an emphasis on various approaches of member states towards Russia (Bozhilova & Hashimoto, 2010; Schmidt-Felzmann, 2011; Youngs, 2009, pp. 79-99). Recently, new insights into the analysis of 'a work-in-progress' in the EU internal gas market have been brought from the International Political Economy (Fernandez & Palazuelos, 2014), governance studies (Andersen & Sitter, 2015), and the English School (Aalto & Korkmaz Temel, 2014). The impact of EU integration on its neighborhoud has been majorly assessed as a (neofunctionalist) rule expansion within EU external governance (Prange-Gstohl, 2009; Renner, 2009) and as a broader acceptance of EU energy *acquis* by other countries, Russia in particular (Belyi, 2012b).

Third, the scholarship has actively engaged in debates about energy security, with a particular focus on its political aspects (Bilgin, 2009; Tekin & Williams, 2009). Debates have been enriched by studies about increasing securitisation of both EU–Russia energy relations (Belyi,

2003; Kirchner & Berk, 2010) and EU energy policies (Maltby, 2013; Natorski & Herranz Surralés, 2008). Russia's role in (pan-)European energy security has been studied predominately from the realist-driven perspective (Dellecker & Gomart, 2011; Feklyunina, 2012; Perovic, 2009). The studies about Russia's energy policy as a tool for coercion (Newnham, 2011; Orttung & Overland, 2011; Smith Stegen, 2011) have coupled with the analysis of domestic non-transparent relations between the Russian Government and Gazprom (Bilgin, 2011; Heinrich, 2008; Kazantsev, 2010).

In Russian-language studies, various versions of the concept of energy (super)power (Grivach & Denisov, 2008) and pipeline politics (Simonov, 2005, pp. 229-249) have been privileged, yet without providing a clear theoretical framework. Conspiracy theories about redistribution of energy resources occupy significant part of studies about energy politics in Russia (Dugin, 2007; Simonov, 2005, pp. 199-229; Zygar' & Panyushkin, 2008). As Pavlova and Romanova (2014) argue, few studies have applied the framework, alternative to the realist approach, and this choice reflects more authors' personal positions rather than represents a result of authors' academic endeavours.

Yet, despite this extensive list, few studies have explicitly addressed the problem of conflicts between the EU and Russia in the European gas market or studied EU–Russia relations in the gas market separately.

A second empirical implication of this thesis is that it touches upon debates about institutional organisation of international gas markets and a potentially emerging global gas market. The discussion of the EU and Russia's institutional models of the gas market can become a starting point for debates about institutional models for an emerging competitive European gas market and for broader discussions about a changing institutional architecture of gas markets around the world (Aalto, 2014; ECS, 2007). Tracing regulatory shifts in the European gas market since the 1990s through the lenses of EU–Russia gas relations, this study contributes to debates about the impact of "regulatory" and "market-based" factors (Talus, 2013, p. 228) on the institutional architecture of gas markets (Konoplyanik, 2010, 2011). However, the study leaves apart discussions about the

prevalence of either market or regulatory factors in gas market liberalisation—discussions that have been consistently pointed in several interviews with EU and Russian officials and experts as the 'chicken-and-egg' dilemma.

The study embraces the argument that domestic institutional factors can play important role in a success or failure of international cooperation, and provides contribution to other areas of research inquiries.

Structure of the Thesis

This study is organised according to its theoretical and empirical aims and comprises five chapters. *Chapter 1* reviews existing literatures that have addressed the conflict–cooperation nexus in energy relations. The discussion stems from the early debates about the role energy resources play in creating tensions in the international arena. The geopolitical approach, which makes conflicts between actors structurally inherited in resource abundance or shortage, is considered as limited since it views competition for resources and a strife for physical control over supplies as a major trigger of energy conflicts. The market approach explains energy conflicts and a lack of international energy institutionalisation by differences in producers' and consumers' models of the gas market, differences which are not always confirmed empirically. This approach inherits certain normativism in advocating free markets as the only right model for gas markets and considers rules and norms that structure energy markets as cost-effective arrangements to mitigate market failures.

Indicating limitations of these deterministic explanations of energy conflicts, the chapter proceeds with the analytical framework which underlines the role of domestic factors in explaining outcomes in international energy relations. Relying extensively on the new institutionalist literature, the study provides the framework for analysing the impact of domestic institutional models on actors' policy actions and on outcomes of their interactions. It also shows how inconsistencies between these models can lead to politicisation and deinstitutionalisation of already existing

international institutions. This approach offers a more nuanced interpretation of conflictual patterns in energy relations and interest-formation regarding interactions in gas markets.

Chapter 2 bridges analytical and empirical parts of the thesis and outlines the research design. It justifies the methodological choice to concentrate on the institutional models of Russia and the EU, and to conceptualise the EU as a single actor despite the fact that the model of the EU Internal Energy Market is still a 'work-in-progress'. The chapter also operationalises the variables and offers a set of indicators that allow tracing the impact of domestic institutional models on EU–Russia gas relations. It concludes with data collection issues and limitations of the study.

Chapter 3 opens empirical part of the research, framing the institutional models of the EU and Russia according to the analytical framework, elaborated in Chapter 2. This chapter seeks to provide an answer to the first research question, which asks whether there are differences in the EU and Russia's institutional models—the model of gas market liberalisation at the supranational level and the model of bilateral cooperation based on state-controlled vertically-integrated monopoly. This chapter also analyses economic transformations of gas markets since 2008. It discusses how the changes—the US shale gas production, sharply increased availability of LNG across the world, and economic recession in Europe—have affected the models under discussion. It points out that these changes facilitated the acceptance of the EU liberalised agenda by domestic actors (primarily, energy companies) and therefore increased internal coherence of the EU model. Contrary, in Russia, they triggered domestic debates about preservation of Gazprom's 'natural monopoly' and invoked some alterations in Russia's institutional model.

Chapter 4 proceeds with the main argument that domestic factors impact international relations. It traces back the main developments of gas markets in Europe since the early 1960s and discusses evolution of the institutional framework of gas trade between the EU and Russia. This chapter supports the research puzzle that initially both sides welcomed deepening gas trade, and that Soviet supplies were not viewed as a matter of security or a potentially conflictual issue. It argues that while diversification of oil supplies from the Middle East and revenues played significant role

in decisions of Western European countries and the USSR respectively, institutional compatibility between the parties during the Cold War facilitated stable development of these relations. Thus, both parties had a high level of state involvement, vertically-integrated companies, monopoly on import and export, and limited diversification capacities. Since differences in the models increased in the late 1990s, adaptation of regulatory frameworks became increasingly intricate.

This chapter re-interprets the history of EU–Russia gas relations and contributes to the underdeveloped field of studies about the changes of institutional organisation of the gas market. It further discusses how domestic institutional models affect policy strategies of the EU and Russia, identifying the contentious issues in gas trade, access to infrastructure, and investments.

Chapter 5 presents three case studies, designed to answer the second research question: under which conditions differences in the institutional models lead to a cooperative or conflictual outcome in EU–Russia gas relations. The three case studies analyse three instances of EU–Russia gas relations, tracing those differences between the models that have been crucial in determining the outcome—cooperation, institutionalised conflict, or institutional conflict. The case of the EU–Russia Gas Advisory Council shows how the parties attempted to mitigate the institutional differences invoked by changes in their models. The case of long-term contract provisions adaptation between the EU and Russia demonstrates that the parties have alleviated the differences within the pre-existing institutionalised context of the EU–Russia framework and international arbitration. The case of failed negotiations on the Transit Protocol to the ECT reveals that differences in EU and Russia's institutional models brought the conflict over transit provisions beyond the existing institutionalised framework and consequently led to further deinstitutionalisation of the ECT process.

The thesis synthesises and summarises the main findings, and discusses their contribution to theoretical debates and their policy implications. It also outlines potential paths for future research. Among others, the thesis demonstrates insufficiency of the existing approaches in IR energy studies and fills the gap in the literature with consideration of domestic institutional factors.

CHAPTER 1. ANALYTICAL FRAMEWORK

Since the 1973 Oil Crisis when energy resources were used as *ultimo ratio* during the Arab–Israeli conflict, imaginary or real threats which finite and unequally allocated energy resources might pose to state security and international energy governance have become central issues for IR energy studies. This chapter reviews how the energy literature has tackled the problems of international conflicts and institutionalisation so far.

Pointing to simplified explanations of energy conflicts as an outcome of different producers' and consumers' interests, this chapter discusses the shortcomings of resource and normative determinism in the analysis of energy relations. Accordingly, energy conflicts are either structurally rooted into unequal allocation of energy resources among states (resource determinism) or the result of producers' deviation from free market principles (normative determinism). As argued in these literatures, these structural and normative factors make international institutionalisation an extremely difficult process.

The chapter proceeds with the analytical framework which offers a more nuanced explanation of increasing politicisation and weakening international energy institutionalisation. It argues that these problems need to be addressed from the point of view of the actor's domestic institutional environment.

1.1 Divergent Interests of Energy Producers and Consumers, Energy Conflicts, and International Institutionalisation

The problems of energy conflicts and institutionalisation of energy relations have been addressed by two major and rather vague approaches. Summarised by Finon and Locatelli (2008, p. 424), they mostly reflect two main strands of IR—the neoliberal (Keohane & Nye, 1977, 1984) and neorealist (Waltz, 1979) paradigms. In energy studies, these approaches have been labeled respectively as 'Markets and Institutions' and 'Regions and Empire' by Correlje and van der Linde (2006); 'market liberalism' and 'economic nationalism' by McGowan (2008); and the 'geopolitical' and 'mercantilist' frameworks by Goldthau and Witte (2010, p. 3).

The first approach (within the neorealist paradigm) prioritises the role of structural factors in states' competition for resources. Accordingly, states are concerned about securing access to resources and their deliveries. The second one (within the neoliberal paradigm) does not disregard cooperation between states, but points that cooperation is problematic due to inherently different interests between energy producing and energy consuming states in choosing a model of the gas market. It often equals interests of consumers with free markets, and those of producers with state control over hydrocarbon sectors, and has a tendency towards normative claims of *a priori* benevolence of a free market choice.

Yet, this division between energy resources "as a commodity to be traded openly on world markets or as a resource to be projected politically for foreign policy power", as well as prioritisation of resource and normative determinism do not fully account for a more comprehensive understanding of energy relations (Keating et al., 2012, p. 1). While interests of producers and consumers differ to a certain extent, empirical evidence shows they are not so antagonistic as usually pictured in academic and policy-oriented studies (Stern, 2014b). These approaches provide solid and parsimonious explanations of energy conflicts; however, both of them link straightforwardly resource reserves to actors' international policy strategies and are more concerned with physical aspects of energy security.

1.1.1 Structural Explanations of Energy Conflicts and Lack of Institutionalisation: the 'Geopolitical Approach' and the Neorealist Paradigm

The geopolitical-realist framework is "the arguably most dominant view in the study of energy relations …. [that] reflects a vague Realist perspective in which control over energy flows is approached as geopolitical competition over power" (Casier, 2011, p. 494), yet few studies make this choice explicit (Dannreuther, 2010, p. 3). In a nutshell, this approach emphasises the prevalence of "national and international security issues and military conflicts, bilateralism and excessive regionalism" over "international economic integration rooted in overall regulation of the flow of goods, capital, and labour" (Finon & Locatelli, 2008, p. 424).

Energy resources and their abundance or shortage across the world are viewed as a source of conflicts between actors because states are argued to seek to control access to resources, transportation, and routes for resource transportation. Competition over resources makes security of supplies increasingly a matter of national security, since energy importing countries have to tackle various supply disruptions used as political weapon by energy producers (Shaffer, 2013). Incorporation of energy issues into foreign policies by consumers opens a room for strategic tensions and even military conflicts aimed to secure access to resources (Daniel Moran & James A Russell, 2009; Newnham, 2011; Youngs, 2009).

Overemphasis on physical aspects of energy security, such as control over resources, infrastructures and routes, is both the major strength and limitation of this approach. As argued, pipeline politics is an essential element of states' strategies and crucial part of balance of power in the post-Cold War world (Klare, 2002, 2005, 2008). Since increasing shortages in supplies are expected according to various versions of the Peak Oil theory,[14] which has become "a subtext or unspoken assumption" in various studies (Daniel Moran & James A. Russell, 2009, p. 4), the likelihood of inter-state conflicts is likely to increase, and militarisation of access to resources is

[14] The Peak Oil theory argues for finality of hydrocarbon resources and a gradual decline of their production. In spite of being often used in policy-oriented publications, it has been argued, however, to overlook technological developments and shifts in production. For further discussion, see Bressand (2013, pp. 20-22); Yergin (2011, p. 227).

expected to intensify (Engdahl, 2011; Kaldor, Karl, & Said, 2007; Klare, 2002, 2009a, 2009b; Zweig & Jianhai, 2005). It is pointed that the measures taken by states, such as military protection of energy fields and resource transportation, are not *per se* a threat to global stability, but when occur in "a context of strategic anxiety and severe economic stress", can invoke military conflicts (Daniel Moran & James A. Russell, 2009, p. 7).

Accordingly, it is "the easiest to imagine major states reconsidering their reluctance to use force against each other. … A crisis in the global energy supply stands out as the last all-weather *casus belli* when the moment comes to hypothesize worst-case scenarios" (Daniel Moran & James A. Russell, 2009, p. 2). This hunt for energy resources leads to tensions and competition between states in a new 'Great Game' in Central Asian and the Caspian Region, a search for control over resources in Africa, tensions in the world oil maritime chokepoints, and attempts to control transnational oil and gas pipelines (Bahgat, 2002).

The main features of this broader approach have included a straightforward link between energy resources and an ability to exert power over other states, less blessed with energy resources. Seeing "energy resources and control over transmission networks … as a source of power" (Casier, 2011, p. 494), studies have analysed whether energy producers can use shortages in energy supplies against energy consumers and what implications such shortages might have for security of supplies of the latters. There have been studies, *inter alia*, about the ability of producing states to control oil supplies, their volumes and prices (Chapman, 2009; Noreng, 2007; Wenger, 2009); the likelihood of 'resource wars' as a result of an increasing states' strife for resources (Fettweis, 2009; Klare, 2009a, 2009b; Daniel Moran & James A Russell, 2009); and virtues of physical control over infrastructure, routes and oil and gas fields (Roberts, 2006; Tekin & Williams, 2011; Tessman & Wolfe, 2011).

Control over energy resources and their transportation has been viewed as an effective way states can project political influence over each other. Since the 1973 Arab oil boycott against those Western countries that supported Israel during the Yom Kippur War, most studies have focused on

the costs of supplies cuts that have to be bared by energy importing states (Deese, 1979; Ikenberry, 1986). Analytically, these studies have been conceptualised in the Oil Weapon and later the Gas Weapon theses, majorly applied to OPEC and Russia's policies respectively (Mikdashi, 1974; Moran, 1981). It has been argued that resources *per se* and physical control over their transportation represent a source of state's power that can affect behaviour of other actors.

Countervailing power of consumers—an ability to resist producers' pressures—has also been viewed in terms of physical actions over resources, such as various forms of embargo and sanctions imposed by consuming countries and international organisations over producing countries (Van de Graaf, 2013), and as various diversification strategies consuming nations may adapt to secure stable and uninterrupted supplies (Vivoda, 2009). In this regards, structural characteristics of energy markets (the global oil market) have been referred to as a factor that affects both producers' ability to impact consumers, and consumers' ability to succeed in embargos and diversification strategies, but they have also been discussed in terms of physical availability and accessibility of resources.

Despite this rich empirical record, few studies have engaged in analytically-grounded debates about compulsory power in energy relations. Most have privileged analysis of producers' dictate, issues of security of supplies, and conflicts over access to resources and control over infrastructure (Klare, 2002). The mechanism of how energy resources are converted into political power has been implicitly attributed to the *de facto* ownership of resources by energy-rich states: the energy weapon was defined as "the threat that energy exporting countries could use their control over energy supplies to influence the political behaviour of client states" (Smith Stegen, 2011, p. 6506). By pointing to the threat exposed to consumers, most studies have focused on the deliverer of power, not the recipient—the major shortcoming of most IR studies about energy power. However, "[since] power is the production of effects, arguably compulsory power is best understood from the perspective of the recipient, not the deliverer, of the direct action" (Barnett & Duvall, 2005a, p. 14), and the recipient might be a consumer, a transit state or a producer.

Some attempts to analyse "the energy weapon" in a more theoretical fashion from the position of the recipient have offered a four-stage model to analyse how resources can be converted into political power in order to "coerce political concessions" and to see whether transformation of "energy resources into political capital" has actually taken place through the commitments of the government that has been threatened (Smith Stegen, 2011, p. 6506). However, rare attempts have been made to scrutinise the conditions under which the recipient concedes. Empirically grounded studies about available tools to pursue rational policies by energy-rich states, as Russia (Orttung & Overland, 2011), have enumerated constraints in successful use of political and economic tools by Russia, but have not framed these conditions analytically.

Most studies from the geopolitical-realist perspective downplay the significance of institutions and norms, which are treated as largely reducible to material interests of strong states, "structurally opposing interests of hydrocarbon-producing and hydrocarbon-consuming nations in relation to energy markets" (Belyi & Talus, 2015a, p. 4). Rules of the game that structure energy markets are understood as limited to agreements of powerful states, and organisational and functional aspects of gas markets are disregarded or at least are treated in an extremely reductionist fashion.

Yet, this approach is useful for its serious account for power, which, however, should not be narrowed down to compulsory power, an attribute of realist thinking for a long period of time. As Barnett and Duvall (2005a, p. 2) claim, "[e]ver since E.H. Carr delivered his devasting rhetorical blow against the 'utopians' and claimed power for 'realism', much of the discipline has tended to treat power as the ability of one state to use material resources to get another state to do what it otherwise would not do". According to Barnett and Duvall (2005a, p. 3), power can be employed also through institutional settings, which states design in order to secure long-term advantages and disadvantage others.

1.1.2 Free Markets and Normativity in Energy Actorness: the 'Market Approach' and the Neoliberal Paradigm

The 'market approach' is an umbrella term for a wide range of theories that do not reject the possibility of states to cooperate in energy areas, and focus on governance arrangements, institutions, and interdependencies between actors. This approach emphasises the importance of "general market-based rules in the international and market regimes", the emphasis that can be also attributed to "the order of the day in the midst of optimistic prophecies about the triumph of globalization and the 'end of the history' after the end of the Cold War" (Finon & Locatelli, 2008, p. 424). These institutions have been intended to reduce transaction costs and promote compliance (Keohane & Nye, 1984; Krasner, 1983), as well as to mitigate market failures (Goldthau, 2012a).

The studies within this approach acknowledge a need to agree on and follow certain rules in order to make transnational energy markets function properly even in the absence of a single supranational institution or a comprehensive regime (Florini, 2010; Florini & Sovacool, 2009; Goldthau & Witte, 2010; Lesage, Van de Graaf, & Westphal, 2010), and argue that "[energy] markets, like any others, do not function without institutions" (Goldthau & Witte, 2010, p. 7). While there are few legally binding mechanisms in energy markets, states need to agree on certain rules and regulations, 'rules of the game', or certain *modus operandi*, which comprise formal rules (laws and regulations) and informal norms (conventions and practices), accepted by market participants (Talus, 2011a, p. 263).

Problems in achieving cooperation in energy have been mostly explained by different interests of producers and consumers. Energy-dependent (resource-poor) states have been argued to back the model of the competitive liberalised gas market in order to mitigate their energy dependence and secure access to energy markets; and energy-producing (resource-rich) states have been contended to choose a greater state control over the energy sectors in order to secure their budget revenues. Differences between these models do not presuppose *bellum omnium contra omnes* in strive for resources as the geopolitical approach would argue, but point to increasing

difficulties in finding common grounds for institutionalisation of consumers' and producers' interests. However, as has been elaborated in Introduction, empirically, this direct link between energy resources and a policy outcome is not so simple and straightforward.

In addition, many studies in this realm have drifted towards a certain degree of normativity about "how energy should be governed without necessarily making this normative stance explicit, as well as implying that market-oriented governance structures are a *fait accompli*….'Energy security' is instead equated with 'free markets', positive economic interdependence is assumed, and 'political interference' and 'statism' are criticised but not explained" (Keating et al., 2012, p. 2). This has led to a deterministic division between the EU, which promotes "a multilateral market regime for energy trade in energy" on the basis of liberal principles, and Russia, which "prefers to use its energy resources to restore its geopolitical power" (Finon & Locatelli, 2008, pp. 424-427). As Kuzemko (2014, p. 59) contends, it has been often assumed that Russia's adaptation to the EU regulatory framework is benevolent *a priori* and that "EU relations with Russia should be 'normalized' by a return to the market liberal path and that market liberal solutions will work in answer to currently energy problems". As Pavlova and Romanova (2014) notice, this normative division reveals a lack of methodological coherence in the analysis since Russia and the EU are analysed from the positions of realist and normative analytical premises respectively.

In broader terms, this 'normative trap' reflects not only certain normative determinism inherited in the neoliberal paradigm *per se*, but also the assumption of differences between sovereign and post-sovereign actors, between Russia as a self-interested modern state and the EU as a post-modern actor that acts according to norms.[15] Such argumentation presumes the dominance of the market approach interpretation *per se* and the fault is attributed to the non-market approach (for example, Russian resource nationalism as a deviation from free markets). This leads to *a priori* normativity in the argument and deflects attention "away from critical analysis of EU energy

[15] It has been widely debated in the field of European Studies, whether the EU represents a *sui generis* actor, e.g., Normative Power (Manners, 2002) or Ethical Power Europe (Aggestam, 2008), which acts according to norms and values, and promotes and reinforces them internationally. For critique and further discussion, see: Diez (2005), Hyde-Price (2006), Sjursen (2006), and Zielonka (2006, 2008).

governance structures and practices" (Kuzemko, 2014, p. 60). At this point, many proponents argue or imply that liberalisation of gas markets will lead to better security of supplies, to more transparency, and, as a result, to more peaceful relations between consumers and producers. So far, the scholarship has largely neglected or addressed insufficiently institutional developments of hydrocarbon sectors, staying in normative traps of either assuming a benign nature of the 'market' model or attributing limited institutionalisation to structural divergence between interests of energy producers and consumers. Some studies, however, made initial steps towards explaining failures in energy governance by domestic developments (Belyi, 2014b).

The neoliberal approach remains relevant because it centers its argument on a need to follow certain agreed rules and norms in order a transnational gas market functions properly. The importance of rules and norms has been continuously disregarded in the geopolitical-realist literature. However, what has been disregarded in the 'market' approach is that the role of gas market rules (institutions) is not only to mitigate market failures and facilitate cost-effectiveness arrangements to tackle global energy issues (Florini & Sovacool, 2009; Leal-Arcas & Filis, 2013), but also to favour one or another vision of energy markets' organisation. Rephrasing Robert Cox (1993), rules are always for someone, and for some purpose.

Assuming a crucial role of free energy markets, the neoliberal literature has largely tasked multilateral energy governance to mitigate market failures and ensure a common level playing field in international energy markets. Having challenged the argument that energy relations are about zero-sum resource competition, this literature, however, has remained nested in the assumptions that multilateral energy governance and institutional organisation of energy markets are free of power calculations. Advocating the *laissez-faire* principle and rationality of energy markets, it has consistently focused on descriptive analysis of how energy markets are or should be organised and on pitfalls of multilateral energy governance (Goldthau, 2012b; Leal-Arcas & Filis, 2013). The extent, to which this literature has engaged in discussions of power, has remained limited to an ambiguous and methodologically challenged counterpoise between market and geopolitical actors,

between those who view energy in terms of open markets and free trade and those who use energy resources as a geopolitical tool (Correlje & van der Linde, 2006; Finon & Locatelli, 2008). By and large, this is exactly what is implied in the publications on liberalisation of the gas markets as the role model, which has attained, paraphrasing Barnett and Duvall (2005a, p. 1), "near-celebrity status". It has been also disregarded in the market approach that markets are not always rational, and perceptions, historical dependencies, and policy visions may play a role in actors' choices (Belyi & Talus, 2015b).

1.2 Bridging the Gap between Domestic and International: Institutional Models of the Gas Market

Taking into account the outlined shortcomings of existing studies, this thesis offers a more nuanced approach to study international institutionalisation in energy. It focuses on the role domestic institutional models play in international institutionalisation and analyses how they affect cooperative and conflictual outcomes in the international arena. It is argued that divergences in domestic institutions may provide a ground for disagreements and conflicts between parties, which are not *necessarily* or *exclusively* based on their nature as energy consumers or producers; and that compatibility of domestic institutional models—mutual acceptance of an option on the continuum between resource nationalism and free markets—allows decreasing the level of politicisation. The question of different models is framed within the new institutionalist framework (Lowndes & Roberts, 2013; Peters, 1999, 2011) with insights from New Institutional Economics (NIE) (North, 1990, 1991). Attributing a greater role to domestic institutional factors, the study joins debates about internal–external linkages in IR and the interrelationship between the domestic and international levels (Starr, 2006).

This study does not deny that international structures and material factors can have considerable impact on how states view energy resources and interactions in energy markets. The

analysis also does not ignore important differences in interests of energy producers and consumers. Yet, this study takes a more critical stance towards the widespread approaches that treat energy conflicts as a product of structural distribution of resources or as a result of deviation from free markets.

The main aim of the thesis is to bring domestic factors—institutional models—back to debates and to examine whether they affect states' intentions to institutionalise their interactions. This analytical choice also allows overcoming certain normativity of the 'market approach' which assumes free markets are the only 'right' choice. It is worthy to note that most studies that have addressed domestic factors in energy have largely focused on correlation between domestic (political) regimes and foreign policy strategies—the choice that links domestic political regime and foreign policy in a causal manner. Thus, 'geopolitical' Russia has been argued to project its energy power as part of foreign policy goals, and the EU—to act according to the 'market' rules.

The goal of this study is to understand how institutional factors affect states' positions in regards to international cooperation. This requires analysis and identification of those institutions that create the institutional environment of the gas market and that are particularly relevant in determining actors' positions during international negotiations. Joining the thread of those studies that have looked at EU–Russia gas relations though the lenses of domestic institutional organisation and change (Boussena & Locatelli, 2013; Fernandez & Palazuelos, 2014; Locatelli, 2013; van der Meulen, 2009), this research considers how domestic institutions shape market structures and create incentives for actors' strategies internationally. Domestic institutions encompass various political and economic interests of domestic players in the gas sector and bring these interests to the international arena as those needed to be protected and promoted. This argument also allows bringing power back to the framework of institutionalisation—since domestic models incorporate core and crucial interests of actors, the prevalence of one or another as the benchmark in an international institutionalised framework becomes a matter of power considerations.

The section proceeds by discussing domestic models, conceptualising international institutionalisation, and addressing power aspects. It concludes with the discussion of energy security, arguing that weak institutional arrangements constitute one of the most crucial aspects of energy security.

1.2.1 Domestic Institutional Models

The term 'model' is defined in this study as a set of rules and norms that guide interactions in the gas market and encompass a broader vision about underlying principles of organisation of the gas sector. In broader terms, a model reflects a paradigm or a set of ideas on the continuum between free markets and resource nationalism, which are reflected in the domestic institutional environment. A model which incorporates formal and informal institutional elements would allow grasping in a more coherent and comprehensive fashion different options actors choose for organising their gas markets.

Domestic institutions of the gas market have been already addressed by several scholars: Locatelli (2012) has investigated increasing differences in "institutional environment"; Talus (2011a); 2013, p. 229) has studied "dynamics of energy governance" within the EU; van der Meulen (2009, p.834) has looked into "the differences between the institutional and economic structure of the EU and Russia and thus the two gas markets"; and Nilsson, Nilsson, Hildingsson, Stripple, and Eikeland (2011) have examined how changes in energy sectors are conditioned by existing policy paths and the process of institutional change.

The conceptualisation of domestic institutional models is based on studies about new institutionalism by Peters (1999, 2011) and complemented with insights from NIE (North, 1990, 1991) to the extent that the latter provides "a framework that is able to link ideas, institutions and policies to economic developments and economic frameworks" and allows connecting "the institutional and governance structure of the EU and Russia to the policies they pursue on the gas market" (van der Meulen, 2009, p. 835).

According to North (1990, pp. 3-4), institutions are defined as "the rules of the game in a society", which can be both formal (rules) and informal (conventions and codes of behaviour). The institutional environment encompasses these formal and informal institutions—shared beliefs, political institutions, judiciary system, and ideology (North, 2005). Impact of a formal institution on the economic and political dynamics is essential, but effectiveness of institutional changes is nested into adjustments of informal rules to rule changes, and therefore, should be considered in the framework of "the complementarities between formal institutions, informal ones, and the implementation mechanisms" (Rossiaud & Locatelli, 2010, p. 8).

The domestic institutional model is thus defined as a set of underlying principles of organisation of the gas market, identified by formal rules, organisational and regulatory frameworks, and informal rules and norms that provide internal consistency of the model. As a complex set of institutional choices, a model can be placed on the continuum between the fully liberalised market and the full state monopoly. Institutional choices address the issues of the state–market interrelationship, which encompass the extent of state involvement (whether the state is an arbiter or a regulator) and the interplay between competition and regulation (whether a certain degree of competition is allowed and competition rules are indeed implemented and applied in practice).

Regarding the gas market, elements of the model are conceptualised on the basis of elements that structure the access to energy resources, elaborated by Rossiaud and Locatelli (2010, p. 10). These elements include norms and rules, which constitute a domestic model of the gas market:

- the way to access the market (the property rights to resources and assets), investment protection, and dispute settlement;
- the organisational model (the level of state involvement and market liberalisation; and the role of state and private companies);
- the competition rules (the level of competition in production, transmission, and export; the role of an (independent) regulator).

External coherence of the model is evaluated according to the institutional environment the model is nested in—the role states play in the hydrocarbon sector, "formal and informal relationships between public bodies and energy companies", and "policy drivers in the context of the background agenda" (Belyi & Talus, 2015a, p. 4). It includes informal institutions, such as legitimacy, property rights and dispute settlement jurisdictions; political institutions and the rule of law; state capacity to introduce an effective regulatory framework in the gas sector; judicial institutions and their legitimacy; interest groups formation in the hydrocarbon sector; and struggles for rent redistribution (criteria, elaborated by North (1990) and adapted by Rossiaud and Locatelli (2010); Rossiaud et al. (2012)).

These aspects have important implications for framing the interrelationship between regulation and competition, the level of deregulation in the gas industry, the level of state intervention to competitive practices of the gas market to guarantee energy security, and the use of resource rent by the state.

Bridging Political and Economic Interests: the Role of Institutional Models

The study advocates the argument that political and economic interests in energy should not be counterpoised, because "the logic of energy markets is deeply interrelated with 'politics', whether in the form of formal, international law or organisations, or informal norms" (Keating et al., 2012, p. 4). By this, the thesis attempts to overcome the dichotomy between commercial and political aspects in energy relations (Stern, 2014c, pp. 93-97), which has persisted in IR energy studies so far. Many studies have prioritised either economic interests of energy companies or political interests of states, engaging in endless debates about the prevalence of either profit maximisation or foreign policy goals in states' policy strategies and their (national and private) commercial actors.

The main questions have been concerned about whether tensions between states are primary due to their divergent political goals or economic (commercial) interests do matter as well. In other words, are tensions in energy relations the result of political and strategic clashes between states or

a disagreement about commercial aspects, such as market shares, profits, and investment? Some studies have pointed out that conflicts between the EU and Russia are primarily of the economic and commercial nature, and principally refer to access to their markets (Casier, 2011, p. 505; Kaveshnikov, 2010). Others have accentuated the political component, such as pipeline politics and Russia's political control over post-Soviet states and some EU member states (Kazantsev, 2010; Newnham, 2011).

This discussion reflects broader theoretical debates about whether energy resources constitute a political or commercial factor in international relations—whether energy resources are "a commodity to be traded openly on world markets or … a resource to be projected politically for foreign policy power" (Keating et al., 2012, p. 1). This thesis argues that this dichotomy is to a large extent normatively deterministic. Assuming this dichotomy, most studies have inevitably overlooked complex interrelationships between profit-based and political calculations in the hydrocarbon sector in both energy producing and importing countries. Thus, it is often assumed that energy producers would promote their geopolitical goals, while energy consumers would pursue purely economic interests. By far, both political (how the market is organised and who has power to and power over) and economic (how these rules reflect economic aspects of the gas sector and the cross-border value chain) interests are incorporated into domestic institutional models and promoted through actors' policy strategies. As Hogselius (2013, pp. 1-2) notices, "[d]espite the Western ideal of an international economy based on free, depoliticised market relations, close links between politics and economics are in actual practice part and parcel of international business. Energy is one of many fields in which international trade is not a 'purely economic' phenomenon".

Analysis of institutions allows revealing both political and economic interests promoted in the international arena: a combination of a political component of how and at what level interactions are to be organised and a commercial component of redistribution of rewards between the parties allows "capturing the economic rents of the value chain and to secure it in the market design" (Stern, 2014c, pp. 93-97).

Institutional Change and Path Dependence

Tracing changes in domestic institutional models of the gas market is a crucial element in revealing international cooperative–conflictual patterns. According to North (1990, pp. 7, 11), institutional change takes place through organisations, "political, economic, social, educational bodies", which are "agents of institutional change …. created to take advantage of those opportunities, and, as the organisations evolve, they alter the institutions". These ongoing interactions between organisations and institutions make institutional change incremental and path dependent. As Rossiaud and Locatelli (2010, p. 9) notice, in NIE, "ideologies and preferences, which are historically and geographically situated, are at the roots of the process of institutional change. They are going to structure the way agents apprehend the opportunity for changes".

Institutional change according to new institutionalist studies (March & Olsen, 1984, 1996; Peters, 1999, pp. 25-42) considers process of learning as a principal means for institutional adaptation. Thus, institutions adapt to changes in the environment, which constitute a set of opportunities for institutions, through the process of learning. Institutional changes in this case are not "necessarily functional …. [since] the normative basis of the institution is an important source for guidance for which changes are appropriate and which are not" (Peters, 1999, p. 34)

Analysis of norms and rules that address the issues of the gas market might contribute to the understanding of institutional changes of the gas market and "the degree of ideological contestation within and between … institutions" (Kuzemko, 2014, p. 60). The regulatory choice of state involvement in the sector, the level of public intervention to mitigate market failures, and understanding of security and resilience are subject to changes, which "can be rapid, as in the case of change in technology, or gradual, as in the case of a change in the underlying policy approach to energy or energy markets" (Belyi & Talus, 2015a, p. 6). Adaptation to technological innovations might be momentous and requires reassessments of existing understandings of organisation of the hydrocarbon sector. The changes in institutional organisation of gas markets might be also

facilitated by the gradual development of energy markets (Konoplyanik, 2010, 2012b), financial and economic crises, and the development of new technologies (Goldthau, 2012a).

1.2.2 Cooperation and Conflict: Actors' Policy Strategies and International Institutions

International institutionalisation has been consistently argued to be problematic but well-needed to provide at least a minimum framework for interactions in the international arena (Keohane & Axelrod, 1985). A high level of interdependence in energy markets urges a need to elaborate certain arrangements "aimed at mitigating emerging risks and facilitating exchange within multi-level and multi-based interactions in Eurasian gas" (Goldthau, 2012a, p. 222). These institutional arrangements have been addressed as *inter alia* "energy governance" (Goldthau, 2012a; Goldthau & Witte, 2010), "legal approximation" of legal frameworks (Romanova, 2012), and "process of international institutionalisation" (Haukkala, 2014). However, as Belyi and Talus (2015a) argue, most studies have focused on the structural aspect of interdependence and physical aspects of actors' vulnerabilities and sensitivities, for example on shortages in supplies and decreases in export revenues (Proedrou, 2007).

Conversely, as elaborated in works by Keohane (1984, 1986, 2002); Keohane and Nye (1977), "the nature of energy interdependencies cannot be dissociated from political perceptions and political understanding" (Belyi & Talus, 2015a, p. 5). Differences in domestic institutional models might increase negative interdependence between actors and provide grounds for disagreements on institutionalisation. In gas relations, negative interdependence might result in diversification policies, absence of a common framework, and prioritisation of physical aspects of energy security.

In order to proceed with analysis of emergence of international institutions, a short overview of existing definitions of what constitutes international institutions is needed. A wide range of conceptualisations varies from all-encompassing institutions (as for example, war) to exclusively formal organisations. International institutions of some kind are always present in interactions

between the parties: Keohane (1984, p. 159) underlines that "instances of cooperation can take place with only minimal institutional structures to support them. But all efforts at international cooperation take place within an institutional context of some kind, which may or may not facilitate cooperative endeavors".

The IR literature about international institutions provides a fragmented field of various definitions, conceptualisations and understandings of what constitutes an international institution. The field is still characterised by the largely isolated rationalist and constructivist camps (Keohane, 1984), which emphasises formal rules and intersubjective norms respectively, and offers "a patchwork understanding of international institutions" (J. Duffield, 2007, pp. 1-2). Since "institutions are often discussed without being defined at all, or after having been defined only casually", the notion might encompass a wide range of 'social realities', such as international organisations, regimes, practices, and norms, and a starting definition of institution as "*a general pattern* or *categorization of activity* or to a *particular* human-constructed arrangement, formally or informally organised" is extremely broad (Keohane, 1984, pp. 162-163). An initial point might become the identification of institutions as "related complexes of rules and norms, identifiable in space and time" (ibid).

Given a complex and intricate web of existing approaches and conceptualisations of international institutions, the comprehensive overview of the existing literature about international institutions by J. Duffield (2007) is of great assistance. He organises international institutions according to four main criteria: institutions as formal organisations, practices, rules, and norms.

The *first* definition of institutions as formal organisations, likely to be the earliest one, earned its recognition in the 1950–1960s when formal international organisations were "the principal subject of institutional inquiry by scholars" (J. Duffield, 2007, p. 3). Yet, this conceptualisation was replaced as too narrow and restrictive by regime studies proliferated during the 1970s. Occasional analysis of formal organisations as international institutions still, however, appears in academic inquiries.

The *second* definition of international institutions as practices viewed regimes as social institutions and patterns of behaviour or practice (Young, 1983, 1989). This conceptualisation of institutions has two major shortcomings. First, it exaggerates the distinction between social institutions and organisations, overemphasising the material aspects of the latter, and overlooking by this "the fact that many, notably intergovernmental, organisations are primarily sets of roles and rules" (J. Duffield, 2007, p. 4). Second, this approach has been widely criticised for closely associating institutions with behavior—the analytical exercise that risks to fall in a trap of identifying institutions on the basis of behaviour and then explaining by these institutions the same behaviour (Keohane, 1993).

The *third* definition of institutions understands them as more or less formal rules, formal frameworks which were created by utility maximising agents in order to promote their interests. Accordingly, rationalist conceptions admit that institutions might affect behaviour, but only by structuring incentives and constraints of the environment, in which rational utility-maximising actors operate. In other words, actors acknowledge the rules but not necessarily find them appropriate. Moreover, a rationalist approach to institutions "diverts attention from the ways in which institutions may endow actors with certain powers and capacities and, in some cases, even create them" (J. Duffield, 2007).

The *fourth* definition of institutions views them as norms, "fundamental ideational phenomena", and "socially shared expectations, understandings, or standards of appropriate behaviour for actors with a given identity" (ibid, p. 6). The proponents underline the importance of intersubjectivity and constrast the logic of appropriateness to the logic of consequences (March & Olsen, 1984, 1989, 1996). Conceptualising international institutions as sets of norms (Wendt, 1999), this approach neglects, however, a wide range of formal features of institutions.

Acknowledging prominence of all discussed approaches to theorise international institutions, this study, however, follows the conceptualisation of international institutions offered by J. Duffield (2007, pp. 7-8) as "relatively stable sets of related constitutive, regulative, and

procedural norms and rules that pertain to the international system, the actors in the system (including states as well as non-state entities), and their activities". A number and combination of elements may vary depending on institution. Accordingly, institutions might consist of intersubjective and formal elements (thus, vaguely backing up constructivist and rationalist conceptions), which can be distinguished conceptually as 'norms' and 'rules' respectively. Norms as intersubjective institutions vary in their strength, which is defined as the level of acceptance of these institutions and intensity of their use. Formal elements of institutions, rules, vary according to their degree of formalisation. This definition, being "an amalgamation and synthesis of existing conceptions of international institutions" (ibid, p. 8), aims to overcome the limitations of the existing conceptualisations and to bridge rationalist and constructivist frameworks.

Finally, J. Duffield (2007, p. 11) offers two-dimensional ontological space to locate various institutional elements at a given momentum:

> Specific institutional elements can assume a wide range of forms. Some will be pure rules; others will be pure norms; and yet others—perhaps most—are best characterized by some combination of rule-like (formal) and norm-like (intersubjective) characteristics. For example, a formal rule may be accompanied by a strong intersubjective belief in its legitimacy. Moreover, the nature of a particular institutional element can change over time.

This conceptualisation of international institutions incorporates both legal and regulatory mechanisms, and informal contractual practices. It allows placing the existing international energy institutions along their degree of formalisation and the level of their acceptance by actors (Figure 1).

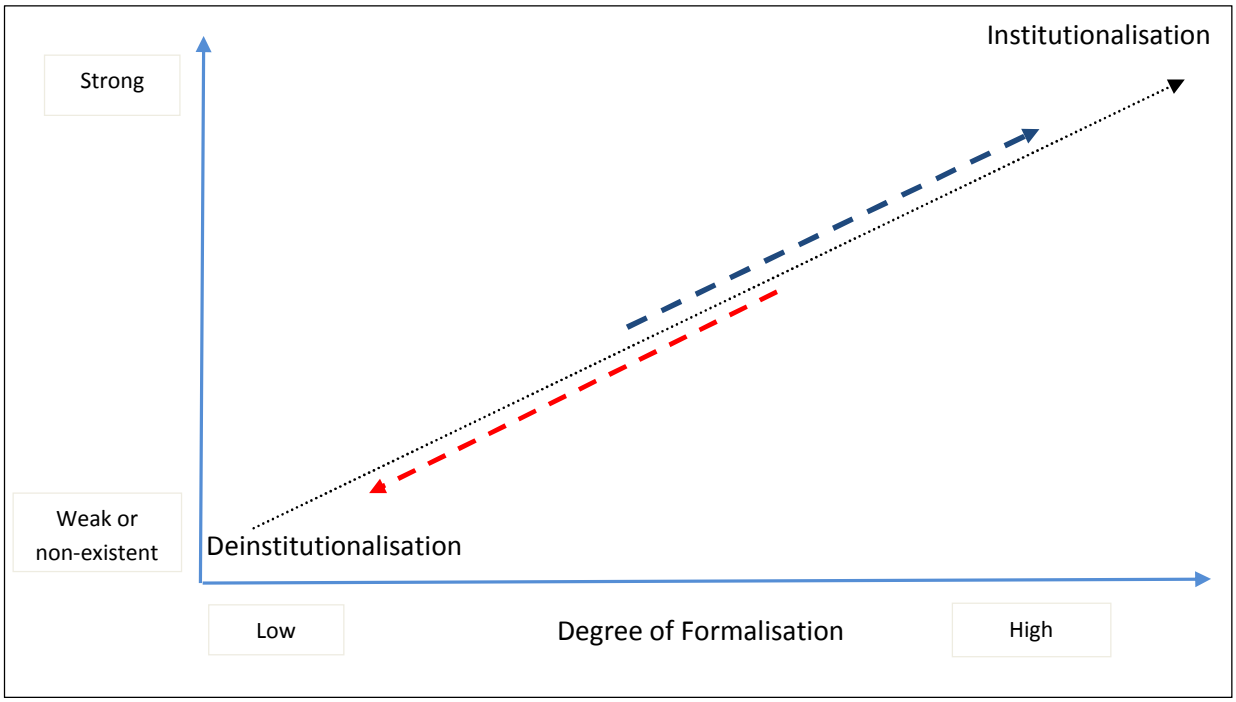


Figure 1. Emergence of International Institutions. Author's elaboration based on J. Duffield (2007)

Degree of Formalisation is the extent to which actors decide to subject themselves to common rules. It varies from absence of explicit rules, *ad hoc* agreements and consultations, and to legally binding regimes. Institutions can be a result of consistent interactions and/or conscious design (Peters, 1999, p. 134).

Level of Acceptance is the level of actors' shared understanding of institutions as an appropriate way of doing things.

The focus on the level of acceptance overcomes excessive formalism of rules. It is argued that "in order for a regime to come into existence there must be an acceptance of a common definition of a policy area or a repetitive pattern of interaction among the participants in a regime that is governed by rules (whether formal or informal)" (Peters, 1999, pp. 131,133). Along interactions over time, actors' expectations can converge since "the institution influences the values of the components and then values influence behaviour" (Peters, 1999, p. 136).

This argument opens a room for bridging domestic and international institutional models. As Milner (1997) shows, "domestic preferences do matter and limit the possible outcomes for a regime" (Peters, 1999, p. 136). In this respect, domestic institutional factors, including *inter alia* "the conception of the role played by the state in the market, the conception of national control over

resources, and regional perceptions of threat and path dependencies", might change perceptions of interdependence, affecting both formal and informal international institutions (Belyi & Talus, 2015a, p. 5).

1.2.3 Institutionalisation and Power: Domestic Institutional Models as Power Benchmarks

Having argued that domestic institutions play a key role in defining interests of actors, the thesis proceeds with the argument that these domestic models become part of actors' power considerations in international interactions. Actors are concerned about who will control dynamics of institutional change and whose domestic model will be set up as a reference point in institutionalised interactions.

The ability to force directly another actor to consent is the way power is expressed in energy relations which has received the closest attention in IR energy studies. As Barnett and Duvall (2005a, p. 2) argue, "the tendency of the discipline [IR] to gravitate towards realism's view of power leads, ironically, to the underestimation of the importance of power in international politics". Institutional settings can also be a source of power—yet of another sort. Power "may manifest itself, for instance, through the creation, design, and operation of energy markets" (Bressand, 2013, p. 19), and control over institutionalised practices in energy markets might constitute part of power relations. By this the focus is switched from compulsory power, the direct control by means of resources and absence of alternatives, to institutional power, indirect control through institutional settings, rules and procedures that steer and constrain actors' actions. In other words, power works "through diffuse processes embedded in international institutions that establish rules that determine who gets to participate in debates and make decisions" (Barnett & Duvall, 2005a, p. 9).

Two crucial criteria of institutional power include an ability to participate in decision-making through formal and informal procedures, including negotiations and day-to-day politics, and control over distribution of rewards. They allow to see "how power drives *selection of institutions*, giving actors very little choice regarding *their participation*, shaping the content of international

norms and rules" (Barnett&Duvall, 2005, p. 23, my italics). Resistance to institutional power by the recipient expresses itself in attempts to alter the "rules of the game" and "the distribution of material and symbolic rewards that are generated through institutional (coordinated or collective) action" (ibid., p. 23). This complex interplay between the deliver and the recipient helps to shed light on various conflicts between interdependent actors about institutionalisation of their relations. By this, the gap can be bridged between "realist who stress power but fail to recognize the importance of international institutions and, on the other hand, liberals who see international institutions without power" (ibid, p. 25).

Institutional power, according to the analytical dimensions of the concept—kinds of social relations through which power works and the specificity of social relations through which effects on actors' capacities are produced—works "through diffuse processes embedded in international institutions that establish rules that determine who gets to participate in debates and make decisions" (Barnett & Duvall, 2005a, p. 9). In other words, power is executed through institutional settings, rules and procedures that steer and constrain actors' actions. This helps to add new aspects to the discussion of institutional changes in the domestic hydrocarbon sector and their expansion towards international hydrocarbon markets.

Institutional power has been inexplicitly acknowledged in studies about changes in energy governance by the Third Energy Package (Boussena & Locatelli, 2010, 2013; Romanova, 2007), expansion of EU regulation through the Energy Community Treaty (Prange-Gstohl, 2009; Renner, 2009; Renner & Trauner, 2009), and about multilateral governance mechanisms, such as the Energy Charter Treaty (Hadfield & Amkhan-Bayno, 2013). However, these discussions have remained primarily nested in the neoliberal interpretation of institutions as ways to mitigate market failures, provide environmental sustainability, and ensure a common level playing field across the markets.

To some extent, there have been attempts to discuss how a market actor can succeed by exporting its regulatory framework (Goldthau & Sitter, 2014, 2015), but they have remained locked into normativity of the market (liberal)–geopolitical (realist) dichotomy, seminally introduced in

energy by Correlje and van der Linde (2006). Locked in the IR neoliberal paradigm, such studies were more interested in how "a liberal actor, committed to the 'regulatory state' agenda both at home and abroad, [can survive] in the increasingly realist world" (Goldthau & Sitter, 2014, p. 1453). Rephrasing Barnett and Duvall (2005a, p. 4), much of the scholarship on energy markets (and especially, on EU market gas liberalisation) with only a slight exaggeration proceeds as if power either does not exist or is of minor importance. For example, the EU institutional model is viewed through the lenses of regulatory liberalisation as a purely technical, regulatory matter which is challenged by pipeline politics and "more security-oriented or protectionist measures" of 'realist' actors (Goldthau & Sitter, 2014, p. 1454). After introduction of power aspects in the institutional organisation of energy markets, its image is changed and the focus is shifted to the question of how and why markets are designed and regulated.

This thesis does avoid normativity of actorness and views institutional power as a way both 'realist' and liberal' actors can promote their interests. However, various actors can prioritise different options in reaching their objectives. Thus, a state with a high level of institutional embededness in energy resources as a source of power will prefer compulsory power, while the actors which institutionally focused on other options of power diffusion will likely choose to promote power through institutional settings. Roughly but not necessarily, 'realist' actors are argued to prefer compulsory power and 'liberal' actors opt for diffusion of institutional power.

1.2.4 Institutional Dimension of Energy Security

The analytical focus on domestic institutional arrangements and their impact on actors' intentions to commit to multilaterally agreed institutions points to weak institutional arrangements as one of the most crucial aspects of energy security. Incompatibility of institutional practices advocated by states and alterations in acceptance of international institutions might weaken existing governance arrangements and create a zone of tensions in cross-border energy flows.

Institutional arrangements are important for creating 'right' incentives for market players: energy security is also about institutional risks, caused by weak or non-existent international institutions. Physical aspects of energy security, such as available capacities, alternative sources and suppliers, are just part of a broader notion of energy security. Stable and well-defined rules in gas trade, transit, and investment protection are a crucial aspect in enhancing stability of cross-border flows and developments in energy sectors. As Victor and Yueh (2010) argue, a common level playing field in energy markets decreases politicisation and helps avoiding commercially unjustified but politically-driven projects. In case international market rules and practices are accepted and shared by market players and their governments, a degree of politicisation of these rules and relations they regulate is likely to be lower. Free markets, which endorse liberalisation and competition to energy markets, have been often argued to decrease politicisation since they treat resources not as strategic goods but as a commodity to be traded in accordance with supply-demand patterns. The study points to certain normativity of this argument and highlights that this "pro-market assumption [rejects] …. the possibility that energy sector liberalisation might disrupt security of supply" (Keating et al., 2012, p. 3).

Contrary, this study argues that compatibility of models—notwithstanding where they are placed on a continuum between free markets and resource nationalism—decreases politicisation since legal and commercial disputes are not brought to the political level as a matter of national security, and norm and rules that structure market interactions are not challenged by market players. The long-term cooperation between Cold War antagonistic regimes—Europe and the USSR—is a fruitful example in this regards. Conversely, when models start diverging, tensions about alterations to the institutional framework of interactions might spread into the political arena. Moreover, the period of institutional transformations may decrease energy security from an institutional point of view. First, these transformations require certain adaptation by market players; second, they may create inconsistencies between the emerging regulatory framework and market developments, thus making this regulatory shift unsustainable.

Conclusion

The research puzzle invokes a question of which factors promote or inhibit international institutionalisation in energy. This chapter has looked into details how the IR literatures have addressed this issue so far. It has pointed out that both the geopolitical and market approaches provide parsimonious explanations, but both of them overlook certain important aspects of energy relations and are often inconsistent with empirical data.

In order to provide a more nuanced picture, the study has argued that international institutionalisation should be analysed from the positions of domestic institutional models, but has not disregarded completely structural components of interdependencies and resource allocations. Differences between models of the gas market may inhibit international institutionalisation and create a further wave of politicisation. Attributing a greater role to domestic factors, the study reinforces research inquiries in energy beyond the deterministic arguments of a 'strive for resources' and benevolent rationality of free markets.

CHAPTER 2. RESEARCH DESIGN

This chapter addresses the methodological choices of the study and outlines the research strategy to bridge the empirical goals of the dissertation and the analytical framework, elaborated in the preceding chapter. Linking domestic institutional factors and cooperative–conflictual patterns of international energy relations, the chapter operationalises the outcomes of relations—cooperation (institutionalisation of interactions in consultative or legally binding forms) and conflict (institutionalised and institutional). The reasoning behind this choice is to provide enriched understanding about EU–Russia gas relations. It helps to reveal that conflicts between the EU and Russia transcend disagreements about substantial issues, such as price disputes and debates about pipeline construction.

Domestic institutional models as the independent variables allow overcoming the assumption that actors' interests are defined exclusively by their resource bases, and offer an explanation of problems of international institutionalisation, alternative to resource and normative determinism. This choice also provides methodological grounds for comparing the EU and Russia and avoiding the normative traps of viewing Russia and the EU as a geopolitical and market actor respectively. The offered framework also questions *a priori* benevolence of the liberalised market model.

The chapter proceeds as following. It further specifies the research question, elaborates the variables, operationalises the main hypothesis, and explains case selection. The chapter concludes with a discussion of the issues of data collection.

2.1 Research Question

This study treats EU–Russia gas relations and the variation in their outcomes (cooperation or conflict) as a valuable and revealing case of the impact of domestic institutional models on international institutionalisation. Taking the institutionalist stance, this thesis contributes to broader theoretical questions: what defines state interests in energy relations? Are they defined solely by a resource base—structural conditions of unequal allocation of energy resources? To what extent do domestic institutions impact developments in international institutions? And to what extent do domestic institutional developments play the role in facilitating shifts from positive to negative interdependence between actors? This thesis asks whether differences in domestic institutional models create too little space for continuity and convergence of rules and norms at the international level. It is also concerned with the question of which factors determine the intensity of such conflicts—in other words, which factors facilitate expansion of conflicts beyond the bilateral or multilateral institutionalised framework.

Empirically, this study derives from observations that despite a high level of interdependence and few available alternative supplies, conflicts between the EU and Russia over various issues of the gas trade, transit, and investment have been intensifying. Growing misunderstandings between the parties have been accompanied with steadily deteriorating formal frameworks: attempts to institutionalise relations within the multilateral ECT process witnessed to be fruitless by the end of the 2000s, when Russia terminated provisional application of the ECT, and negotiations on a new PCA, supposed to include more precise energy provisions, were pending for nearly a decade.

It is perplexing that conflictual patterns emerged at the moment when natural gas deficit was widely predicted in the nearby future, oil prices grew incrementally, and little prospects of something similar to a global gas market were in place, at least, as was argued, over the next several decades. Thus, conflicts between the EU and Russia were less expected and deepening of interdependence was anticipated. However, empirically unanticipated renegotiations of commodity

contracts provisions, growing inconsistencies in the gas pricing mechanism, failures of transit arrangements, and disarray in investment provisions became a bone of contention between the EU and Russia.

The main research question of this thesis addresses a shift towards conflictual patters in EU–Russia gas relations:

Why despite a high level of interdependence, have the relations between the EU and Russia in the gas market become conflictual since the 2000s?

This core research question is analytically divided into two sub-questions—the first one examines whether a shift towards conflictual patterns in EU–Russia gas relations has taken place due to differences in the domestic models, while the second one asks which factors of these models lead to more conflictual or cooperative outcomes:

RQ.1 Have EU–Russia gas relations moved to conflictual patterns because of difference in their institutional models?

RQ.2 Under what conditions may differences of these institutional models lead to cooperation, institutionalised conflict, or institutional conflict in EU–Russia gas relations?

2.2 Hypotheses and Research Strategy

The rationale of this study is justified by the awareness that conventional approaches can provide an inadequate or insufficient explanation of energy conflicts because they assume incompatibility of interests between producers and consumers as a major explanation of limited international institutionalisation. As elaborated in the previous chapter, exclusion of domestic institutional factors

provides insufficient explanations: conflicts are explained either by competition for resources, caused by structural conditions (unequal allocation of resources among states), or by different models producers and consumers choose on the basis of these structural conditions (producers choose a state-interventionist model and consumers—a competitive one).

Alternatively to these explanations, the thesis argues that differences in these models are explained to larger extent by domestic institutions than by structural conditions of resource abundance or shortage. Consequently, the thesis argues for the following all-embracing hypothesis: *domestic institutions can alter and/or impact the outcomes of relations between states and inhibit or facilitate institutionalisation of their interactions.*

The argument advocated in this thesis challenges the pervasive assumption that conflicts between the EU and Russia over gas issues are a clear outcome of EU and Russia's divergent interests as a consumer and a producer respectively. Divergence in interests of resource-rich and resource-poor countries is assumed to inhibit the emergence of a comprehensive framework for international cooperation. Contrary, this study attributes the major role in disagreements to differences in domestic institutions. Increasing incompatibility of domestic models complicates abilities to reach an agreement about which model shall become a benchmark for relations in the future and constitute the ground for a broader framework of the European gas market.

This argument is supported by the observation that EU–Russia gas relations have become increasingly conflictual since the early 2000s—the period when a number of reforms regarding further liberalisation of the EU gas market were adopted; and when a number of initiatives confirmed stronger adherence to the state-controlled natural monopoly model in Russia. The gas crises of 2006 and 2009 were also to a certain extent results of the stalled multilateral ECT process due to failures of the EU and Russia to agree on transit provisions. These disputes indicated a progressive emergence of incompatible differences between the institutional models.

Arguing that domestic institutions impact actors' policy strategies, the study seeks to establish correlation between institutional organisations of domestic gas markets and deinstitutionalisation of EU–Russia gas relations. In other words, the main hypothesis is following*:*

The different institutional models of the gas market of the EU and Russia may lead to a cooperative or conflictual outcome in EU–Russia gas relations.

Two sub-hypotheses follow two sub-research questions:

h.1. Since 2000s, the EU and Russia's domestic institutional models of the gas market—the EU model of the competitive liberalised market and the Russia's one of state-controlled monopoly—have diverged significantly, and incompatibility of these models has led towards conflictual patterns in EU–Russia gas relations.

The second sub-hypothesis seeks to elaborate a set of indicators that trace the impact of domestic institutional models on international relations, as a result of actors becoming locked into path dependence that stems from domestic institutions:

h2. Cooperative outcome is likely to be achieved when there is existence and acceptance of a dispute settlement mechanism; higher liberalisation of market and lower state involvement, and existence of an independent regulator; higher dependence on infrastructure; lower resilience towards dependencies; higher durability of contracts; and similarities in market fragmentation.

Conflictual outcome is likely to be achieved when there is absence or non-acceptance of a dispute settlement mechanism; lower liberalisation of market and higher state involvement, and absence of

an independent regulator; lower dependence on infrastructure; higher resilience towards dependencies; lower durability of contracts; and differences in market fragmentation.

The aim of this thesis is to identify how these divergences in the institutional models have inhibited the process of cooperation between the EU and Russia. The thesis also seeks to understand which factors of institutional models spurs conflict towards deinstitutionalisation.

The next two chapters (Chapters 3 and 4) provide an answer to the first research question, pointing to major differences in the models and the tensions these differences have invoked in EU–Russia gas relations. These institutional models are analysed according to the norms and rules they encompass and political and commercial interests they internalise. Chapter 3 also touches upon economic transformations of gas markets in late 2000s. Chapter 4 traces the evolution of EU–Russia gas relations with the emphasis on the 'turning points' in historical developments of the models. By means of three empirical case studies, Chapter 5 addresses the second research question, examining which aspects of the models may lead to cooperation, institutionalised conflict or institutional conflicts. This chapter proceeds with operationalisation of the models' impact on outcomes of EU–Russia gas relations. The issues of case selection are addressed below in this chapter.

2.3 Variables

Operationalisation of dependent and independent variables is the first step of the research inquiry. In the case under investigation, EU–Russia gas relations are the dependent variable, and domestic institutional models are the independent variables.

2.3.1 Dependent Variable: EU–Russia Gas Relations

EU–Russia gas relations are defined as "a process of international institutionalisation" (Haukkala, 2011, p. 22) between the EU and Russia regarding a regulatory framework of the gas market. Because of the industry specificity (Herrmann, Dunphy, & Copus, 2010), these interactions require

formal and informal agreements on issues of the gas trade, investment provisions, and access to infrastructure. The deliberate methodological choice is to conceptualise EU–Russia gas relations as the relations between the EU (its supranational bodies in line with their competences) and Russia, a choice that invokes debates about appropriateness of disregarding bilateral relations between member states and Russia. Several considerations are useful to prove this choice is rewarding for the purposes of answering the main research question.

First, division between Old and New member states according to shares of Russian gas supplies in their national energy mixes (Goldthau, 2008, p. 687; Kratochvil & Tichy, 2013; Neuman, 2010; Schmidt-Felzmann, 2011) and the analysis of relations between member states and Russia (Verhoeff & Niemann, 2011) are not the main focus of this thesis. Acknowledging an intricate complexity of decision-making within the EU both regarding the Internal Energy Market and formulation of external policies (Schmidt-Felzmann, 2008), the thesis concentrates on finding out to what extent the EU and Russia have managed to agree on common rules of the game in gas markets. Given dynamics of integration processes in energy (J. S. Duffield & Birchfield, 2011; Eikeland, 2011a), as well as institutional trends in the Russian gas sector (Belyi, 2013b), EU–Russia gas relations are viewed more as a "process with a dynamism of its own" rather than a snapshot in "a static manner" (Haukkala, 2011, p. 4).

This study acknowledges complexity of EU integration process (Geyer, 2003; Jorgensen, 1997; Keeler, 2005) and does not conceptualise the EU as a single actor in a direct and straightforward manner. Indeed, a focus on domestic institutional models sheds light on processes in the Internal Energy Market and helps bridge implicitly European Studies and IR—the issue which has been essential for many scholars of both disciplines (Pollack, 2001).

Second, despite the EU Internal Gas Market is not a fully functioning wholesale gas market yet (ACER, 2014b, pp. 169-185), and institutional differences between member states still persist, empirical observations support the argument that the EU supranational institutional model of the gas market has increasingly advanced. The thesis does not take the neofunctionalist stance that

integration progresses *per se* through spillover as analytical premises, but acknowledges these gradual developments empirically. Political entrepreneurship by the European Commission and a gradual expansion of its competences have been pointed by several scholars (Maltby, 2013). Among examples, there are elimination of transit between member states by the 2003 Second Gas Directive, and a gradual expansion of EU competition policy towards the energy sector. The proposal to create the Energy Union, embraced by the Commission in late 2014, is another step towards a more coherent model of an inter-connected liberalised gas market with a more solid external dimension of EU energy policy.

Monitoring and enforcement of the IEM regulations also witness a gradual competence transfer to the supranational level. Despite the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT), created in 2011 at the ACER to detect market abuses, now does not prescribe enforcement mechanisms outside national jurisdictions of member states, a trend towards gradual empowerment of the REMIT was often underlined by EU officials during interviews. Increasing cooperation between national regulatory authorities (NRAs), CEER and ACER are also in place (Lenzi, 2013, pp. 152-176).

The cases of South Stream and OPAL are also about a greater supranational involvement in the IEM. Both pipeline projects were treated as an EU issue, and most interviewed experts agreed that construction or proper functioning of the onshore part of South Stream would have been extremely difficult without its compliance to EU regulations despite certain hesitance of some member states (Bulgaria) and contracting parties to the Energy Community Treaty (Serbia and Bosnia and Herzegovina).

The methodological choice advocated in the thesis also helps to overcome a narrow focus on country-to-country relations (member states–Russia), EU's, member states' and Russia's energy policies, and EU–Russia formal dialogues, such as the Energy Dialogue—or a mix of all three approaches—in the analysis of EU–Russia energy relations.

The starting point to define EU–Russia gas relations is to conceptualise their outcomes as the cooperation–conflict nexus, which is viewed as a success or failure of institutionalisation of relations within bilateral and/or multilateral frameworks. This conflict–cooperation nexus in institutional terms can be schematised in three groups: cooperation leads to creation of formal or informal institutions; conflict can take place within pre-existing bilateral and/or multilateral institutional settings (institutionalised conflict) and outside them (institutional conflict), depending on whether the parties accept these settings as an appropriate framework for conflict resolution.

Many studies have extensively examined various energy conflicts in EU–Russia relations, yet most of them have concentrated only on substantial issues. As summarised by Orttung and Overland (2011, p. 78), "a limited number of objects of contentions in the conflicts" include *inter alia* a price level, volumes of sales, asset ownership, and transit pipeline construction permission. Contrary, this study addresses conflictive–cooperation patterns about regulation of these objects of contention. For example, it is not about whether Gazprom attempts to buy control shares in EU downstream or to build a pipeline, and host states and companies resist these endeavours, but about whether the EU and Russia manage to agree on rules that regulate these interactions.

The outcome of EU–Russia gas relations is schematised in three groups: cooperation, institutionalised conflict, and institutional conflict.

Cooperation is understood as the creation of a new or enhancement of an existing international institution—formal or informal, consultative or legally binding—which is designed to mitigate differences, adjust norms and rules, and facilitate a common approach towards various issues in the gas market. In EU–Russia gas relations, such institutions may include the Energy Dialogue, the Gas Advisory Council, the Early Warning Mechanism, and long-term contracts.

Institutionalised conflict is understood as disagreements regarding institutional settings of interactions, which are discussed and settled within the procedures of pre-existing or negotiated international institutions—either bilateral (consultations, special provisions) or international (e.g.,

the Arbitration Institute of the Stockholm Chamber of Commerce and the Permanent Court of Arbitration in The Hague).

Institutional conflict is understood as expansion of disagreements regarding institutional settings of interactions beyond the pre-existing or negotiated international institutions, which are no longer accepted by the parties as a means of conflict resolution. The conflict is transferred into political space and may lead to weakening and disappearance of existing international institutions (deinstitutionalisation).

Based on the literature review and studies by *inter alia* Boussena and Locatelli (2013), the following *indicators* are used to detect outcomes of EU–Russia gas relations:

- Acceptance of international institutions is defined as commitments to the provisions of these institutions and incorporation of these provisions into national legislation. High acceptance might lead to strengthening of an international institution, moderate one—to its weakening, and low acceptance might facilitate marginalisation and further disappearance of an institution. High, moderate and low values of this indicator are understood as following.
    - High acceptance of an international institution is understood as ratification of provisions and commitments to dispute settlement mechanism (DSM) provided by this institution.
    - Moderate acceptance of an international institution is understood as provisional application of its provisions and limited commitments to DSM provided by this institution.
    - Low acceptance of an international institution is understood as non-ratification and withdrawal from provisional application and non-acceptance of DSM provided by this institution.

- Conditions of EU–Russia bilateral frameworks are defined as institutionalised practices established by the parties in order to facilitate interactions about gas market issues. High, moderate and low values of this indicator are understood as following.
    - High value is understood as the existence of legally binding and/or consultative frameworks, reciprocal adjustments of domestic frameworks, and inclusion of energy provisions into the PCA.
    - Moderate value is understood as the existence of predominantly technical and/or political consultations, *ad hoc* adjustment of domestic frameworks, and non-inclusion of energy provisions in the PCA.
    - Low value is understood as the absence of legally-binding and consultative frameworks, the absence of technical and political consultations, non-adjustment of domestic frameworks, non-inclusion of energy provisions into the PCA, and a pending new PCA.

- Acceptance of international arbitration court decisions is defined as party's commitments to decisions of international arbitration courts on gas market disputes. This indicator shows whether parties accept international settings as a forum for debates. High, moderate and low values of this indicator are understood as following.
    - High acceptance is understood as acceptance of a decision on substantive issues of the case and acceptance of DSM.
    - Moderate acceptance is understood as partial acceptance of a decision on substantive issues of the case and acceptance of DSM.
    - Low acceptance is understood as non-acceptance of a decision on substantive issues of the case and non-acceptance of DSM.

- Conditions of member states–Russia relations are defined as practices between the member states and Russia that might affect the EU–Russia framework. High, moderate and low values of this indicator are understood as following.
    - High value is understood as a prevalence of member states–Russia projects and initiatives that either contradict or disregard the EU–Russia framework.
    - Moderate value is attributed to member states–Russia projects and initiatives that address some issues of the EU–Russia framework and might contradict it in certain cases.
    - Low value is understood as the prevalence of a broader EU–Russia framework over projects and initiatives between member states and Russia.

- Intensity of legal disputes is defined as the level of political and media involvement and the scale of proposed fines in legal disputes. High, moderate and low values of this indicator are understood as following.
    - High intensity of legal disputes is understood as politicisation of a dispute, a (unreasonably) high scale of proposed fines, and a high level of media involvement.
    - Moderate intensity of legal disputes is understood as dispute settlement between commercial actors about substantive issues, awards (fines) set up within the existing scales, and a moderate level of media involvement.
    - Low intensity of legal disputes is understood as the absence of politicisation of a dispute, dispute settlement between commercial actors about substantive issues, and low media involvement.

Based on the proposed indicators, *cooperation* is argued to take place, when there are a high level of acceptance of multilateral institutions; legally binding and/or consultative frameworks within

EU–Russia gas relations; and a low level of intensity of legal disputes between the parties; international arbitration court decisions are accepted by the parties; and bilateral member states–Russia relations are conducted in accordance with the EU–Russia broader framework.

Institutionalised conflict is argued to take place, when there are a moderate level of acceptance of multilateral institutions; technical and/or political consultations within EU–Russia gas relations; partial acceptance of international arbitration court decisions; and a moderate level of intensity of legal disputes between the parties; and issues of the EU–Russia regulatory framework are partially set up within initiatives between member states and Russia.

Institutional conflict is argued to take place, when there are a low level of acceptance of multilateral institutions; no consultative frameworks within EU–Russia gas relations; low acceptance or non-acceptance of international arbitration court decisions; and a high level of intensity of legal disputes between the parties; and issues of the EU–Russia regulatory framework are set up by initiatives between member states and Russia.

Empirical indicators are specified in the Table 1 below.

Table 1. Indicators for Outcomes of EU–Russia Gas Relations

Indicators	**Outcome of EU–Russia gas relations**		
	Cooperation	***Institutionalised conflict***	***Institutional conflict***
Acceptance of multilateral institutions	High (Ratification; functioning a dispute settlement mechanism)	Moderate (Provisional Application; limited acceptance of a dispute settlement mechanism)	Low (Withdrawal, no ratification, no Provisional Application; no acceptance of a dispute settlement mechanism)
Conditions of EU–Russia bilateral frameworks	High (legally binding or consultative frameworks; reciprocal adjustment to these frameworks; energy	Moderate (predominantly technical and/or political consultations; energy provisions are not included into the PCA; *ad*	Low (no legal/consultative frameworks; no technical or political consultations; a pending PCA)

Indicators	Outcome of EU–Russia gas relations		
	Cooperation	***Institutionalised conflict***	***Institutional conflict***
	provisions are included into the PCA)	*hoc* adjustments of the frameworks)	
Acceptance of international arbitration court decisions	High (acceptance of a decision on substantive issues of the case; acceptance of a dispute settlement mechanism)	Moderate (partial acceptance of a decision on substantive issues of the case; acceptance of a dispute settlement mechanism)	Low (non-acceptance of a decision on substantive issues of the case and non-acceptance of a dispute settlement mechanism)
Conditions of member states–Russia relations	Low (replacement with the EU–Russia regulatory framework)	Moderate (issues of EU–Russia regulatory frameworks are partially addressed by initiatives between member states and Russia)	High (prevalence of *ad hoc* member states–Russia relations; their various projects and initiatives either contradict or disregard EU–Russia frameworks)
Intensity of legal disputes	Low (no politicisation; a commercial level; low media involvement)	Moderate (Commercial (predominantly) and political levels; moderate media involvement; awards (fines) set up within the existing scales)	High (politicisation of the dispute; a (unreasonably) high scale of proposed fines; a high level of media involvement

The next step is to operationalise the issues which are addressed via various frameworks of interactions between the EU and Russia. Three issue areas—the gas trade, investment provisions, and access to infrastructure—allow identifying the conditions of outcomes of EU–Russia gas relations. The extent of agreement on these issues—their acceptance by both parties and institutionalisation in formal or informal frameworks—characterises the overall state of EU–Russia gas relations.

The issues of the *gas trade* include three aspects of gas commodity contracts—the gas pricing mechanism (how the price is defined); clauses of gas commodity contracts (*inter alia* TOP, destination clauses, and price review clauses); and duration of contracts (short- or long-term).

- *Cooperation* is argued to take place when the gas pricing mechanism is accepted and not taken for revision by *both* parties—or in case it is under revision, there is a reciprocal adjustment; contract clauses are accepted by both parties; and decisions about duration of contracts are left to commercial players (energy companies) in accordance with trends in energy market developments and commercial considerations.
- *Institutionalised conflict* takes place in case the gas pricing mechanism and clauses are taken for revision by one of the parties, but the dispute is settled within the existing framework of interactions; and duration of contracts is altered by the parties within consultation processes.
- *Institutional conflict* emerges when revisions of the gas pricing mechanism and clauses are not accepted by one of the parties and no consultations are taken within the existing frameworks of interactions; and duration of contracts is changed unilaterally by one of the parties.

The issues of *investment provisions* include three aspects—investment protection (whether there are rules that guarantee investment protection); access provisions (whether there is reciprocity in access to domestic markets of the parties); and investment dispute resolution (whether there is an agreement in which jurisdiction—national, EU, or international—the dispute is to be settled and the decision to be enforced).

- *Cooperation* is argued to take place when there are clearly defined legally binding rules for investment protection; legal reciprocity; and jurisdiction of dispute settlement is clearly defined, agreed and accepted by the parties.
- *Institutionalised conflict* takes place in case clearly defined legally binding rules for investment protection are being renegotiated or *ad hoc* rules for investment protection are being changed; there is *ad hoc* reciprocity (asset swaps); and investment dispute settlement exists but is not applied by the parties.

- *Institutional conflict* emerges when there are no clear legally binding rules for investment protection or at least one party does not ratify these rules or withdraws from their application; there is a conflict about *ad hoc* reciprocity; and there is either no dispute settlement mechanism or the parties do not accept the existing one.

The issues of *access to infrastructure* include three aspects—the right to access infrastructure (whether there is an agreement regarding operational rights); transit rules (whether there is a common understanding of what comprises transit); and tariffs (whether there is a common understanding of how transit tariffs are set up).

- *Cooperation* is argued to take place when there is an agreement regarding operational rights (regulatory or obligatory TPA and criteria for the TPA exemption); an accepted definition of transit; and an accepted transit tariff methodology.
- *Institutionalised conflict* takes place in case operational rights (regulatory or obligatory TPA and criteria for the TPA exemption) and transit and tariff provisions are renegotiated with the existing framework.
- *Institutional conflict* emerges when there is no agreement regarding operational rights (regulatory or obligatory TPA and criteria for the TPA exemption) and transit and tariff provisions; and one or both parties leave the institutional framework.

Empirical indicators by these issue areas are presented in the Table 2 below.

Table 2. Indicators for Outcomes of EU–Russia Gas Relations by Issue Area

Issue Area	Issues	Outcome of EU–Russia gas relations		
		Cooperation	***Institutionalised conflict***	***Institutional conflict***
Gas Trade	– The gas pricing mechanism – Clauses of commodity contracts – Duration of commodity contracts	The gas pricing mechanism and clauses are accepted or reciprocally adjusted; and decisions about duration of contracts are left to commercial players	The gas pricing mechanism and clauses are taken for revision by one or both parties; duration of contracts is set up within consultation procedures	The revisions of the gas pricing mechanism and clauses are not accepted by one or both parties, and no consultations are taken; duration of contracts is changed unilaterally by one of the parties
Investment provisions	– Investment protection; – Access provisions: reciprocity; – Investment disputes	Clearly defined legally binding rules for investment protection; legal reciprocity; and jurisdiction of dispute settlement is clearly defined, agreed and accepted by the parties	Clearly defined legally binding rules for investment protection are being renegotiated, or *ad hoc* rules for investment protection are being changed; there is *ad hoc* reciprocity (asset swaps); and investment dispute settlement is accepted but not applied by the parties	There are no clear legally binding rules for investment protection; at least one party withdraws from a framework or does not ratify these rules; *ad hoc* rules are being challenged; and there is no dispute settlement mechanism or the parties do not accept the existing one
Access to infrastructure	– Access to infrastructure; – Transit; – Transit tariffs	There is an agreement regarding operational rights (regulatory or obligatory third party access (TPA) and criteria for the TPA exemption), transit and tariff provisions	Operational rights (regulatory or obligatory third party access (TPA) and criteria for the TPA exemption), transit and tariff provisions are renegotiated within the existing framework	There is no agreement regarding operational rights (regulatory or obligatory third party access (TPA) and criteria for the TPA exemption) and transit and tariff provisions, one or both parties leave the institutional framework

2.3.2 Independent Variable: Domestic Institutional Models of the Gas Market

The independent variable of this study is a domestic institutional model of the gas market. The model is defined as a set of domestic institutions of the gas market—norms (informal practices) and rules—that create a certain institutional environment and affect actors' policy strategies regarding the process of institutionalisation of their gas relations.

Norms and rules are organised according to the elements that structure interactions in the gas market, discussed in the Chapter 1 (Rossiaud & Locatelli, 2010, p. 10):

- the way to access the market (property rights to resources and their protection), protect investments, and to settle investment disputes;
- the organisational model (the level of state involvement and market liberalisation; the role of state and private companies; and participation of foreign companies in upstream and downstream activities);
- the competition rules (the level of competition in production, transmission, distribution, and export; and the role of a (independent) regulator).

These domestic institutions are elaborated in Table 3 and applied to the case of the EU and Russia in Chapter 3.

Table 3. Domestic Institutional Models of the Gas Market

Issues	Domestic Norms and Rules
Access to market	Discrimination/non-discrimination of foreign investors; Law applied to investment protection (national/international); Availability of a dispute settlement mechanism (national/international).
The organisational model	The level of state control (state as a regulator/arbiter, presence or absence of an independent regulator); The level of participation of foreign companies in upstream and downstream activities; The level of market liberalisation (vertically-integrated companies or separation of production, transmission, and distribution).
The competition rules	The level of competition (liberalised market/(partial) monopoly for transmission and export) and regulation (regulated/liberalised market, regulated/liberalised prices).

Interests, both political and economic, which are accommodated through these institutions, are operationalised as follows.

Revenues are defined as economic benefits from cross-border gas trade. They can be secured by various mechanisms in gas commodity contracts, such as either flexibility of pricing or flexibility of volumes. Flexibility of pricing is an adaptation to price volatility via the oil indexation of gas prices. Flexibility of volumes is adaptation to volume risks by agreeing a minimum volume to be purchased by the buyer. It guarantees a certain amount of revenues for the seller and certain flexibility of volumes for the buyer.

Risk division/*risk accommodation* is the division of risks between producers ('resource' risks of upstream activity, exploration of new gas fields and infrastructure) and consumers ('market' risks of downstream activity, marketing and sales). Resource and market risks are accommodated through gas commodity contracts.

Property and operating rights are rights to own, access and protect resources and infrastructure.

Political and symbolic dominance is the ability to promote interests through a regulatory framework, including a control over dispute resolution, revenues, and risk divisions.

2.4 Operationalisation of Hypotheses

The task is to conceptualise actors' strategies and to elaborate indicators that impact the outcome of interactions. Interests accommodated in the models might become a matter of power considerations about prospective institutionalised frameworks. Domestic institutional models affect actors' strategies to promote and protect interests in interactions with others. The Table 4 bridges domestic models, presented in Table 3, and outcomes of EU–Russia gas relations by issue areas, presented in Table 2. Actors' international strategies encompass various choices about three issues to agree on—gas commodity contracts, access to infrastructure, and investment regulation.

Table 4. Actors' Strategies Regarding Institutionalised Interactions in Gas Markets

Issue Area	Strategies Regarding Institutionalised Interactions in Gas Markets
Gas commodity contracts (GCCs)	The nature of GCCs: a commodity purchase or an investment contract; Gas pricing (oil-indexed/hub-based); Existence or absence of restrictive clauses in GCCs (*inter alia* for resale and volumes).
Access to infrastructure	Mandatory or negotiated access to infrastructure; Frameworks for transit tariffs and dispute resolution (bilateral/multilateral, negotiated/legally binding); Capacities allocation (contract for the use of infrastructure): a mechanism and duration.
Investment regulation	The principle of reciprocity (legal/*ad hoc*) and non-discrimination; Dispute settlement (national/international); Investment protection

Domestic institutional models facilitate creation of the market environment that locks actors into path dependence that stems from domestic institutions. Based on existing attempts in the literature

(Boussena & Locatelli, 2010, 2013; Romanova, 2014), a set of variables is elaborated to bridge domestic models and outcomes of EU–Russia gas relations.

- *Existence/acceptance of a dispute settlement mechanism (DSM)* is understood as presence of a framework for dispute resolution (formal/informal, legally binding/consultative). The accepted formal legally binding DSM is likely to produce a cooperative outcome or to lead to dispute resolution within the institutionalised framework; while an informal and consultative DSM, partially or non-accepted by actors, is likely to spillover the institutional conflict (Martin, 2011).
- *Liberalisation of markets and the level of state involvement* are understood as rules of market functioning which regulate the level of state involvement (state as a main player or as a regulator). The higher the level of state involvement and lower market liberalisation, the higher is possibility of a conflictual policy strategy. The higher the difference between the models (high market liberalisation and a low level of state involvement *vs.* low market liberalisation and a high level of state involvement), the higher is possibility of an institutional conflict. Existence of an independent regulator with clearly delineated tasks and authorities also facilitates mitigation of differences between actors.
- *Dependence on infrastructure* is understood as reliance on the extensive cross-border infrastructure network. The higher dependence on infrastructure, the more likely is a cooperative outcome. The higher market diversification (alterations of infrastructure routes and break up with previous path dependence) is, the more likely a conflictual outcome is.
- *Resilience towards dependencies* (diversification and market dynamics) is defined as existence of alternatives which allow an actor not to depend on another. The higher resilience of the parties, the more likely a conflictual outcome is.

- *Durability of contracts* is understood as institutional stability of commodity and capacity contracts in each institutional model. The higher durability of contracts, the less likely a conflictual outcome is.
- *Market fragmentation* is the level of market interconnection, which includes access to capacities and price convergence, and the degree of abusive behaviour in wholesale gas market. Differences in market fragmentation are more likely to lead to conflictual outcomes.

To sum up, the main operational hypotheses are:

Cooperative outcome *is likely to be achieved when there is existence and acceptance of a dispute settlement mechanism; higher market liberalisation and lower state involvement, and existence of an independent regulator; higher dependence on infrastructure; lower resilience towards dependencies; a higher durability of contracts, and similarities in market fragmentation.*

Conflictual outcome *is likely to be achieved when there is non-acceptance or absence of a dispute settlement mechanism; lower market liberalisation and higher state involvement, and absence of an independent regulator; lower dependence on infrastructure; higher resilience towards dependencies; a lower durability of contracts, and differences in market fragmentation.*

2.5 Case Selection and Methods

In order to fulfill the research objectives of assessing the impact of domestic institutions on international cooperation, a qualitative research design with case studies is employed. The case study method, according to Gillham (2000, p. 21), refers "to both within-case analysis of single cases and comparisons among a small number of cases, as most case studies involve both kinds of analysis due to the limits of either methods used alone". Thus, a case is "an instance of a class of events of interest to the investigator (George 1979a). A case study is thus a well-defined aspect of a

historical happening that the investigator selects for analysis, rather than a historical happening itself" (Gillham, 2000, p. 20).

Methodologically, a single-case research design invokes the issues of generalisability of results. However, as George and Bennet (2005) argue, a single-case study can bring important insights if it tests a crucial case. In the case of EU–Russia gas relations, the hypothesis that domestic institutional models do matter can be veryfied or dismissed by a single crucial case study (Gerring, 2007). Following the study by Haukkala (2011, p. 66) about the EU–Russia strategic partnership, this thesis is "envisaged as a single case study of international institutionalisation which investigates the EU–Russia relationship". The focus on the EU and Russia is justified by their key roles in defining future institutional configurations of the European gas market.

Norway, one of the three top gas suppliers to the EU, accepts most EU energy *acquis*. Algeria, another key gas supplier to the EU, preserves the model of a vertically-integrated gas sector with a high state control. Thus, minimum 51 per cent share is reserved for Sonatrach, a state-controlled gas company, in all projects with foreign participation. This rule was left untouched after the amendments introduced by the Algerian Government in 2013 in order to facilitate foreign investments. Relations between the EU and Algeria are not conflict-free and include, for example, various disputes between Sonatrach and Spanish energy companies in the Algerian upstream (Darbouche, 2011; Darbouche & Hallouche). However, Algeria does not seek to export its model to the European gas market and demonstrates readiness to accept EU rules in case they do not challenge the country's resource export revenues.

Three empirical case studies help validating the hypotheses—process-tracing allows identifying the conditions that led to one or another outcome, tracing back whether and how domestic institutional models impacted actors' strategies and outcomes in their interactions and which mechanisms were involved (Collier, 2011; George & Bennet, 2005). Case studies selection is made to see whether empirical data are consistent with operational hypotheses and to reveal different causal mechanisms that lead to one or another outcome. Additional criteria for case

selection are time frame and different issue-areas of EU–Russia gas relations, the criteria borrowed from the study of Haukkala (2011). Thus, the cases under discussion cover roughly the period of 2000–2014 and touch upon issues of transit, access to infrastructure, gas pricing and commodity contracts, as well as broader issues of organisation of gas markets.

Case 1. Cooperation: the Gas Advisory Council (GAC) is the case when the EU and Russia have managed to create a new institution, yet a consultative one, to mitigate the differences incurred by implementation of the Third Energy Package. The GAC was created in 2011 and was based on long-lasting developments in the Energy Dialogue (since 2000) and several attempts to establish information exchange, as the EU–Russia Early Warning Mechanism in 2009. Given a high degree of differences between the EU and Russia, a consultative GAC is considered as a positive outcome.

Case 2. Institutionalised conflict: renegotiations of commodity gas contracts provisions is a case when the EU and Russia have used the existing frameworks of EU–Russia bilateral cooperation and international arbitration in order to mitigate differences. The case shows how the impact of EU liberalisation trends (a separation of commodity and capacity contracts) on long-term contracts has been alleviated through the existing framework. While some of the issues have been resolved (the destination clauses); others (the gas pricing mechanism) might spill over into an institutional conflict.

Case 3. Institutional Conflict: negotiations over the Transit Protocol of the ECT is the case when differences between the EU and Russia's models have inhibited mitigation of disagreements on transit provisions and have consequently weakened both EU–Russia gas relations and the multilateral ECT process. The turning point took place in 2000, when Russia refused to ratify the ECT without clarifications of the Transit Protocol and the EU started moving towards greater integration of its internal market. This divergence was conceptualised in 2003, when the EU Second Gas Directive abolished thee intra-EU gas transit, and in 2009, when Russia terminated provisional application of the ECT.

2.6 Data Collection

The study has been primarily based on desk research of publicly and freely available primary and secondary sources, which have been attributed different tasks in accordance to the method of triangulation (Gillham, 2000, p. 20). Among primary sources, documents, official statements, and press releases have been examined, and interviews have been conducted during the field trip to Moscow in September–October 2012, and several trips to Brussels during 2013–2014. During the field trip to Moscow, the affiliation institute was the Energy Research Institute of the Russian Academy of Sciences (ERIRAS).

2.6.1 Documents

The research has been based on publicly available sources: interviews and statements of EU and Russia's official representatives, press releases of energy companies and national governments in open access have been used. A high level of confidentiality of information in the field was a clear limitation faced during the research process.

At the EU level, documentations of the European Commission (primarily, DG Energy and DG Competition), the Council, the European Parliament, and the Energy Community Secretariat—*inter alia*, legislative acts, proposals, consultative papers, minutes available in open access, notes by member states—have been consulted. These documents have been accessed via Euralex database, and in the Central Library of the European Commission during several short field trips to Brussels in 2013–2014. For assessing developments of the IEM, official documents by ACER and CEER, and reports of national regulatory authorities (NRAs) and European Network of Transmission System Operators–Gas (ENTSOG) have been analysed.

From the Russian side, documents, reports, and press releases from the websites of the Ministry of Energy of Russia and the Russian Government, the Presidential Commission for Strategic Development of the Fuel and Energy Sector and Environmental Security, and Government

Commission on the Fuel and Energy Complex, the Reserve Replacement and Improving the Economy's Energy Efficiency have been analysed.

The Energy Charter Treaty and related documentation of negotiations on Transit Protocol, reports of the Gas Advisory Council and the Energy Dialogue, and accessible international arbitration cases have also been assessed. Websites of energy companies and transmission system operators (TSOs) were consulted as well. In order to receive official publications, the following major media and professional sources have been used: European Voice, EurActiv, RIA Novosti, and ITARTASS; ICIS, NaturalGasEurope, and Platts.

2.6.2 Statistics

Economic transformations of gas markets have been analysed on the basis of statistical reports and cross-checked during some interviews. The study is aware of limitations of any statistical report due to certain biases inherited into its methodology of data collection. Moreover, statistical reports of different organisations vary in applied methodologies and data interpretation, and "[w]hen reading published, one should take into consideration the source of data and the biases it may reflect" (Shaffer, 2009, p. 10). Therefore, several statistical reports have been used for acquiring information about energy production, consumption and reserves, and about pricing trends and trade flows—the *World Energy Outlook* by the IEA, the *Statistic Energy Review* by BP, the *ACER/CEER Annual Reports on the Results of Monitoring the Internal Electricity and Natural Gas Markets*, and *Prognos* by Skolkovo. More general data have been accessed via EuroStat (EU) and *Rosgoskomstat* (Russia). Policy-makers and experts were also asked to comment on the information presented in these reports.

2.6.3 Interviews

In order to crosscheck the information obtained from documents and statistical reports, interviews have been conducted with EU and Russia's officials and experts. Interviews can significantly complement document analysis, because they allow addressing sensitive issues

directly to the actors involved into decision-making, understanding actors' attitudes, and obtaining some 'behind doors' information.

In this thesis, the term "interview" is understood in broader sense, encompassing a wide range of conversations with experts aimed to obtain required information (Gillham, 2000, p. 59). As Rathburn (2008, p. 686) argues, "interviewing, despite its flaws, is often the best tool for establishing how subjective factors influence political decision-making, the motivations of those involved, and the role of agency in events of interest". In this regards, it is essential to admit that among numerous debates about methodological shortcomings of interviews, the major is arguably that "there is no codified model of 'the' expert interview and that there cannot be any such thing; or that, if such a canonization is developed, it is bound to lose any value it may have because it will attribute exaggerated methodological significance to the experience of specific cases" (Bogner & Menz, 2009, p. 43).

According to Bogner and Menz (2009, p. 44), three obstacles refer to a methodological generalisation of interviews. *First*, the definition of an expert depends on the topic and the field under investigation, interviewees are often chosen for their unique role in the event or their particular position on the issue. *Second*, since various interferences are often possible during conversations, there is a limited "range of prescriptive methodological rules available" (Bogner & Menz, 2009, p. 44). *Third*, interviews are always guided by the questions the interviewer seeks to answer. However, the flexibility of interview structuring can be viewed as an advantage: the added value of interviewing is a chance to discuss the issues the interviewer is particularly interested in. Other potential methodological challenges, as summarised by Rathburn (2008, pp. 691-695), might include subjectivity of both an interviewee and an interviewer, and a potential bias of interviewees in their responses.

Interviews conducted during this study are defined as the systematising expert interview—"an attempt to obtain systematic and complete information …. the expert is treated here primarily as a guide who possesses certain valid pieces of knowledge and information, as someone with a

specific kind of specialized knowledge that is not available to the researcher" (Bogner & Menz, 2009, pp. 46-47). Interviews with an average length of 60 minutes were conducted in Moscow in September–October 2012 and Brussels in November 2013 and throughout 2014 during short visits to Brussels.[16] They were structured as open interviews, since "the open interview provides the room for the interviewee to unfold his own outlooks and reflections" and avoids "a prefixed guideline" (Meuser & Nagel, 2009, p. 31). In addition to the arranged interviews, a number of informal discussions took place during coffee breaks and R&Q sessions at various events.

A purposive sampling on the basis of the author's evaluation of relevance of experts to the research embeds the challenge of a sampling bias (Meuser & Nagel, 2009, p. 18). As Littig (2009, p. 103) argues, "indeed, the attributed expert or elite status is more often set by the actual field of research and research goals". The initial list of potential interviewees was discussed with the peers at the institutional affiliations during the study visits to Moscow and Brussels and expanded by snowballing technique. According to suggestions by Rathburn (2008, p. 699), the interviewees were asked to recommend other experts to talk to. In particular cases, an interviewer can be advised not to talk to certain persons, as it happened to the author—she was firmly advised not to contact a researcher in Moscow, since he was considered *persona non grata* in the Russian academic and expert communities, and the conversation with him might have hindered access to other members of these communities.

The lists of potential interviewees were designed in order to include policy-makers, experts, the representatives of academic community, and companies' representatives, and each case was decided individually. Those, who were unavailable during the research trips, were contacted later and were interviewed in other venues—occasional meetings at conferences and workshops were widely used for this purpose. Interviewees were contacted by mail and phone, in both cases an official letter of introduction was sent, which clearly stated the research topic, the author's research affiliation, financial aspects of the project, and research aims and prospective questions to be asked

[16] A list of framework questions is provided in Appendix 1.

during the meeting. No recording was used due to the objections raised by mostly all interviewees. All interviews were conducted in Russian, English, and Italian without assistance of interpreters on the basis of full anonymity, and no names or research affiliation are therefore mentioned in the text.

Some experts have been additionally contacted later via email or via Skype in order to clarify some issues, arisen at the later stages of the research process. These follow-up interviews after personal meetings allowed escaping the common problem usually associated with telephone interviews—as Walliman and Baiche (2001, p. 239) reasonably point to "important visual clues between interviewer and interviewee, e.g. eye contact, smiling, puzzled looks".

The topics, covered in interviews, included the broad discussion of the situation with further deeper elaboration of the cases, depending on the profile of an interview. Thus, for the field trip in Moscow (September–October 2012), a preliminary list of the expert to speak with encompassed experts from ERIRAS, Skolkovo Energy Center, Institute for Energy and Finances, the Higher School of Economics, and Moscow State Institute of International Relations (MGIMO); journalists, Governmental officials and representatives of Gazprom. During several trips to Brussels, the representatives of the ECT Secretariat, DG Energy and DG Competition, representatives of energy companies to Brussels, and Russia's representatives to Brussels were interviewed. A number of events and conferences were attended in order to meet people otherwise difficult to reach—such as the Moscow Energy Week and the Gas Days in Skolkovo.

2.6.4 Secondary sources

Secondary sources constitute important part of empirical data, especially in case they deal with information, which is not available in open access or cannot be obtained by the author directly due to certain constraints. They include academic publications, reports and working papers of research centers and think tanks, presentations and lectures at conferences and workshops. Several major research centers have been consulted for the first-hand publications—*inter alia*, the Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP), the Center for European Policy

Studies (CEPS), the Energy Research Institute of the Russian Academy of Sciences (ERIRAS), Florence School of Regulation (FSR), the Oxford Institute for Energy Studies, and Skolkovo Energy Center. In order to update herself about academic developments in the field in Russia, the author also consulted PhD theses at the Russian State Library during the stay in Moscow in 2012.

CHAPTER 3. LIBERALISED GAS MARKET *VS.* STATE MONOPOLY: DIVERGENCES BETWEEN THE EU AND RUSSIA'S MODELS

This chapter opens the empirical part of the research. It analyses the EU and Russia's domestic models of the gas market, maps out their developments, and identifies their key differences. The period under investigation encompasses domestic developments in the EU and Russia during 1990–2014, and particularly focuses on institutional changes during the 2000s. This chapter addresses those institutional transformations which have resulted from EU integration processes and hectic transitions from command economy in Russia during the post-Soviet turmoil of the 1990s. Domestic institutional choices of the EU and Russia during the 2000s affected the *status quo* interrelationships between state and market and altered the nexus between competition and regulation.

Three 'turning points' have marked the choice made by the EU and Russia during the 2000s:

- 1998: negotiations on Russia's ratification of the ECT continue, despite some misunderstandings persist; meanwhile, the EU adopts the First Gas Directive and starts enhancing more competitive and liberalised provisions than those provided by the ECT; reinforcement of state control in the gas sector in Russia signals drawbacks towards resource nationalism.
- 2003: the EU Second Gas Directive enhances market liberalisation beyond provisions of the ECT; Russia passes several laws that increase state intervention in the hydrocarbon sector and reinforces informal practices of upstream projects financing, while debates about gas sector reforms do not result in substantial changes.

- 2009: the Third Energy Package finalises EU liberalisation efforts; Russia preserves Gazprom's pipeline gas export monopoly, strengthens state control over the sector and reinforces informal interrelationships between the Government and Gazprom.

These points have changed significantly three major aspects of the models—the way to access the market, to guarantee investment protection and to settle disputes; the way to organise the market; and the interplay between competition and regulation in the gas sector. These changes have triggered a lot of uncertainties for both domestic and external stakeholders both in the EU and Russia. It is also worthy to note that institutional transformations both in the EU and Russia remain complex and ambigious. Thus, in the EU, increasing supranational public intervention in the liberalised model coincides with introduction of security provisions in the liberal markets. For example, significant part of EU public funds is allocated to new gas infrastructure, ten-year infrastructure planning is introduced, and Regulation 994/2010 prescribes security of supply obligations for member states. In the external dimension, the Commission is increasingly involved in bilateral relations between member states and external suppliers, and in negotiations of pipeline projects (Esakova, 2012). The recent proposals, in Autumn 2014, to create a single gas purchaser in the EU also raise important considerations about the evolution of the EU gas model.

In Russia, overreaching state involvement, formal and informal restrictive practices for foreign investments in the hydrocarbon sector, and preservation of Gazprom's key role coexist with acknowledgment of a need to address greater competition in international gas markets. Persistency of domestic stakeholders to enhance competition and to ensure *de facto* application of already existing competitive provisions in the Russian legislation, such as the regulated TPA, have incurred partial liberalisation of the gas sector.

3.1 Russia's Model of the State-Controlled Vertically-Integrated Monopoly

After the dissolution of the USSR and the period of transition from the command economy in the early 1990s, Russia's gas sector avoided large scale privatisation that triggered the oil sector (Eder, Andrews-Speed, & Korzhubaev, 2009). The structure of the Soviet Ministry of Gas was preserved in the form of Gazprom, a vertically-integrated natural gas monopoly with a large percentage of state ownership. The company kept the dominant position in the domestic market with the share of nearly 80 per cent of gas production, and preserved transmission and export monopoly (Stern, 2005).

Exemption of Gazprom from market reforms was largely associated with the position of Viktor Chernomyrdin, then the head of Gazprom, who consistently insisted on the preservation of the existing structure of the company and opposed privatisation of the gas sector with a firm belief that gas sector should be excluded from privatisation reforms (Zygar' & Panyushkin, 2008). This decision was also grounded in the important social and economic role of gas supplies to the power sector and heavily subsidised regulated household gas prices (Henderson, Pirani, & Yafimava, 2014; Mitrova, 2014).

Since the 2000s, the trend towards greater state control and enhancement of Gazprom's monopoly coincided with developments in the oil industry: majorly controlled by various oligarchic groups with various degree of allegiance with the government, the oil sector was gradually returned under the State auspice, a return which was accompanied with path-breaking cases and trials, such as the seminal Yukos case (Belyi, 2013b; Riley, 2010; Sakwa, 2010b, 2014). The trend towards reinforcement of state involvement in the hydrocarbon sector, which was at that moment "in a parlous state", reflected a much broader shift from liberal reforms towards a greater public intervention and coincided with the beginning of the first Presidency by Vladimir Putin in 2000 (Eder et al., 2009, pp. 223-224). Led directly by "the president himself, supported by his senior officials and not by the relevant ministries and agencies who tended to oppose this reversal of earlier liberal policies" (*ibid*), these reforms touched upon the regulatory frameworks of foreign

investment regime, resource exploitation, taxation, and export networks, and signified a more centralised control over the sector.

The revival of state control and Gazprom's 'natural monopoly' was formalised into several initiatives in the hydrocarbon sector in the mid-2000s. First, gas export monopoly was legally confirmed: Gazprom's *de facto* export monopoly was codified in 2006 in line with Federal Law 'About Gas Export' (Russia, 2006). Second, the state's share in Gazprom was increased up to 50 per cent (Gazprom, 2014d). Third, Strategic Sector Law created legal obstacles for foreign investments in Russian upstream and reinforced the obligatory participation of Gazprom in upstream projects (Eder et al., 2009).

Gazprom, which remains the crucial actor in Russian gas sector, however, faces challenges: despite the growth of gas production in Russia during the 2000s, Gazprom's share decreased from 92 per cent to 78 per cent (Belyi, 2011), while new independent gas producers gained greater importance and claimed for a greater role in Russian gas sector in the end of the 2000s (Henderson, 2014b). The regulatory framework of the gas market has also witnessed some shifts, at least formally, which included attempts to introduce a 'dual' gas market in Russia and to implement in practice the regulated third party access. Gazprom's positions were further weakened in 2014 when LNG export monopoly was abolished.

3.1.1 Access to Resources, Investment Protection, and Dispute Settlement

Resource nationalism—overreaching state sovereignty over its natural resources—has gradually reinforced its positions in the Russian gas sector. A number of laws and regulations, such as the Strategic Sector Law, which confirmed the exemption of the upstream hydrocarbon sector from the National Regime, were amended in order to reestablish state control over resources and access to them. Informal practices of shadow negotiations and nationalisation persisted as well. Thus, a number of politically induced renegotiations and disputes with foreign investors have taken place since the 2000s. The cases of environmental investigations in the Kovytke field and Sakhalin forced

foreign investors either to withdraw from the projects or to decrease their shares in favour of Russian companies, presumably those state-owned (Krysiek, 2007).

State control has been outreached ever further, providing that the state is not only a regulator, but also a direct participant in the market and an arbiter in any disputes between market players (Baev, 2014; Gustafson, 2012). This state intervention reflects broader power constellations in the institutional environment in Russia, which include the top-down delegation of authorities and close control over the sector by the Presidential Administration (Sakwa, 2008, 2010a).

In 2005, a new Strategic Sector Law was passed, devising further restrictions for foreign investors (as well as Russian companies with foreign capital) in Russian gas sector—they were denied access to the fields, which were defined as subsoil block of federal significance. Further specification of criteria of 'federal significance' was provided in the amendments of the Federal Law on the Subsoil Law—types of reserves, location, and volumes needed to be considered when a decision is taken. The Government was entitled to take decisions whether access to subsoil blocks of federal significance is granted and the license is withdrawn on a wide range of reasons, including those of national security. Consequently, in March 2011, the new more restrictive amendments to the Strategic Sector Law and Subsoil Law limited acquisition of strategic subsoil assets by foreigners only to 10 per cent. National jurisdiction for dispute settlement and regulated access to upstream activities has invoked *ad hoc* reciprocity on case-by-case basis.

The role of the state as an arbiter was reinforced with the establishment of the Presidential Commission on Energy in June 2012, which was headed by Igor Sechin, the former vice-president and the current CEO of Rosneft. Despite designed only to provide consultations to the Government, this Commission immediately grasped the most important informal decision-making processes. Informally, this Commission also marginalised the Government Commission on Fuel and Energy Complex and Replenishment of Mineral Resources. The complex web of interrelationships between the President, the Government, oil and gas interest groups has facilitated an intricate mechanism of financing for the projects and served as a balancing mechanism for moderation of stakeholders'

interest (Baev, 2014; Gustafson, 2012). Growing perceptions of resource nationalism have reinforced state control over investments into upstream and significantly restricted foreign participation (Belyi, 2009).

3.1.2 The Organisational Model

The organisational model of the gas market in Russia is defined as a natural monopoly with a high level of state control and involvement. During the 1990s, state preserved 36 per cent of the company shares, and participation of foreign investors was restricted to 10 per cent. A vertically-integrated structure was preserved, despite several attempts to reform the gas market and to create a 'dual' gas market, which was designed to comprise a free traded gas market and the vertically-integrated distribution (Locatelli, 2013). In 1996, *Mezhregiongaz*, a company with 100 per cent ownership of Gazprom, was created as a main wholesale supplier in Russia, while retail was administered by regional gas companies, also owned by Gazprom. Within this complex vertically-integrated structure, Gazprom and its subsidiaries represent an intricate network of cross-subsidies because access to energy is largely perceived as a right and creates a complex justification for fair prices and subsidies for households. Reflecting "the particular features of the Russian institutional environment" (Locatelli, 2013, p. 7), the market dominance of Gazprom links state and economic interests.

Debates about the reform of Gazprom and the gas market have become a long lasting and fruitless endeavour since Gazprom demonstrated a high level resistance to any changes that might challenge its key positions in the domestic market. In addition, strong perceptions of Gazprom as *natsionalnoe dostoyanie* (the national treasure) persist in the Russian Government. In 2005, after 51 per cent of Gazprom's shares were acquired by the State, the relations between Gazprom and the Government became ever more articulated: key positions in Gazprom were used as 'a revolving door' system for Government and Gazprom officials. State control is rather high, and informal

interconnections between Gazprom management and the Government have been pointed by a number of interviewed experts (Baev, 2014).

The role of independent gas producers was rather negligent during the 1990s, but recently their share in gas production has increased: state-owned Rosneft and privately-owned Novatek, headed by the alleged ally of the President (Henderson, 2014b), have challenged the model "that enables non-monetary relations and low energy prices to be best managed" (Locatelli, 2013, p. 6). After TNK-BP was bought by Rosneft, Rosneft's ambitions for greater involvement into the gas sector and obtaining access to Gazprom's infrastructure increased and fuelled uncertainties about further liberalisation of the Russian gas market (Belyi & Goldthau, 2015; Papchenkova & Serov, 2014).

3.1.3 Competition Rules

The concept of 'natural gas monopoly' was formalised into the law of 1992 (Gazprom, 2014c). This regulatory choice was justified by the fact that due to geographical and economic conditions competition in the Russian gas sector was not economically feasible, and the whole gas sector, not only transmission networks, should be treated as natural monopoly (Belyi, 2011). Located in the remote areas of Western and Eastern Siberia, gas fields had to be connected with domestic and external consumers by a lengthy infrastructure, which was argued to be uncompetitive (Government, 1999). With the average distance of two thousand km, Gazprom's transmission monopoly was justified as an optimal choice. However, despite some economic benefits this monopoly might bring to Gazprom, modernisation of extensive infrastructures also becomes a financial burden for the company.

Despite transmission and export monopoly remains an untouched issue in Russian gas sector, already in 1997, Russia introduced the regulated third party access (TPA) by independent producers to the Gazprom's pipeline system. However, despite this formal rule is part of Russian national legislation, in practice, non-legal barriers are used by Gazprom's subsidiaries in order to

limit access to the transmission capacities, such as alleged incompatibility of technical characteristics of gas from independent producers (Larin, 2009). This "opaque access regime" (Belyi, 2011) informally implies that gas ownership transfer to Gazprom is often the only option to get access to the transmission network, and thus, to the domestic market. Non-transparent capacity allocation persists in the domestic gas market and mostly depends on informal negotiations of independent producers with Gazprom. For example, Transnafta failed to negotiate access to infrastructure and finally sold gas to Gazprom's subsidiaries, while Lukoil managed to get access for the period of 2012–2016.

Attempts to partially open the domestic market and to create a two-level market did not result in any substantial changes and were widely questioned to be feasible, as was pointed in many interviews with Russian representatives of Gazprom and the expert community. However, in the last years, increasing pressures from other domestic stakeholders, such as oil majors and independent gas producers, were put on abolishing restrictive practices of access to infrastructure and non-transparent practices of Gazprom's purchases of cheap gas from other domestic producers. The dual gas market, designed as a compromise between requests for reforms and a complex web of interests of domestic players and the state, signals the emergence of competitive traits in the Russian gas market (Belyi & Goldthau, 2015; Locatelli, 2013).

There is no independent regulator in Russia; access to infrastructure and tariffs are in competence of the Federal Antimonopoly Service (FAS) and the Federal Tariff Service (FTS) respectively, which, however, shall consult Gazprom. As a result, Gazprom's subsidiaries consistently block available capacities on the technical reasons, and FAS has limited capacities to check whether unavailability of capacities is justified. However, recently, as many interviewees pointed, the trend seems to change towards greater empowerment of FAS (Serov, 2014b).

FTS tariff structuring is majorly grounded in a 'right for gas supply' for social needs and applies the distance-based approach, which does not take into account volumes, time used for shipment, and a duration of contract. Tariffs are set up in consultations with Gazprom, which can

significantly alter the level of tariffs and to hinder incentives of independent producers to enter the domestic gas market. The Russia's model is designed as such that the domestic market is heavily subsidised. In 2013, according to the report of Gazprom, the average net price (excluding VAT, exercise tax, and custom duties) in Europe grew from 168.9 euros/mcm in 2009 to 229 euros/mcm in 2013 and on domestic market was 42.7 euros/mcm in 2009 to 80.3 euros/mcm in 2013 (Gazprom, 2014a).

Subsidised prices, aggravated with large non payments due to the economic situation in the country during the 1990s, made the domestic market not so much attractive for Gazprom. A gradual increase of domestic prices as part of the tariff reform increases interests of both independent producers and Gazprom itself in the domestic gas market (Mitrova, 2014). Since gas export to Europe provides major part of revenues for Gazprom, preservation of export monopoly remains a cornerstone of Gazprom's strategy. Despite numerous and long-lasting proposals to liberalise production and export and facilitate access to transmission network by independent producers, Gazprom's monopoly over transmission and pipeline gas export remains untouched. According to Russia (2006), all export of gas was a subject for full monopoly—other producers had to sell gas to Gazprom, yet at much lower prices (Henderson, 2014b). Pressures from domestic actors and competitive pressures from international gas markets created the right moment for liberalisation of LNG export in early 2014, justified by a need to create incentives for developments of new fields and investments by other companies.

Unless access to production and gas market is eased, growing dissatisfaction by other domestic players is likely to increase. During 2014, unclear messages appeared regarding pipeline export liberalisation—a result much aspired by Rosneft and Novatek, who are increasingly engaging in the gas sector. Several legal disputes brought by Rosneft against Gazprom in order to get access to the pipelines, reveals major changes in the Russia's institutional model (Interfax, 2014e).

3.2 The EU Model of Liberalised Competitive Market

The EU model was designed to enhance competition and price convergence, to interconnect fragmented markets, and, as a final result, to decrease retail prices for end consumers (ACER, 2014b, 2014c). Started in the late 1980s with several directives about access to networks and wholesale provisions, the liberalisation process got its impetus in the late 1990s with the 1998 First Gas Directive, which introduced first careful steps towards unbundling and enhancement of competition in the gas sector. Thus, management unbundling (account separation) of production and transmission systems was required and the regulatory TPA was introduced. The 2003 Second Gas Directive became another important step towards creation of the internal gas market—its proposals included a radical shortening of LTCs, introduction of legal unbundling, enhancement of competition between member states, and elimination of intra-EU gas transit (Yafimava, 2013).

Following the 2003 Second Gas Directive, in 2007, the Second Sector Inquiry reported limited success in market integration and persistingly high market fragmentation and invoked the preparation of the Third Energy Package by the Commission (Eikeland, 2011b; European Commission, 2007). The overall model of the Internal Gas Market was elaborated on the basis of the Gas Target Model (GTM), which provided some benchmark market characteristics to achieve in order to consider liberalisation completed (ACER, 2015; CEER, 2011; Posaner, 2014). The model prescribes creation of liquid interconnected gas hubs with common regulatory rules, which are to be elaborated in the Network Codes during the 'process of creation of the pan-European technical rules', as was pointed during the interview by an EU official. The EU has been increasingly viewed as a regulator that enhances cooperation of national regulatory authorities (NRAs) and creates a common level playing field.

3.2.1 Access to Market, Investment Protection, and Dispute Settlement

Liberalisation process in the EU has created a new supranational dimension of the investment regime. Allocating investment policy into EU competence, the TEP has created a complex legal

case of interplays between bilateral investment treaties, concluded by member states and third countries, ECT investment provisions, and EU law provisions.

Unbundling, separation of production, transmission and distribution, introduced by the TEP, will also have consequences for foreign investments in the EU. Foreign companies might be required to sell their assets in case they are involved in more than one activity of production, transmission and distribution. The concept of reciprocity, enhanced by the EU, is based on the process of EU rules expansion via the Energy Community Treaty and TEP provisions. The Third Party Clause stipulates that the owner of infrastructure in the EU territory should meet the TEP criteria about unbundling, even if comes from non-EU state. This clause allows to expand reciprocity to non-EU states—a member state can restrict a non-EU monopoly to operate in the EU transmission business (Haghighi, 2009).

3.2.2 The Organisational Model

Since the early 2000s, the creation of the EU Internal Gas Market has become crucial part of the EU energy policy. Developments in EU gas markets were also fuelled by the interruptions of gas supplies towards the EU via Ukraine due to the infamous gas disputes between Russia and Ukraine in 2006 and 2009. This was a period marked by ever growing political entrepreneurship by the Commission aimed to enhance ever deeper liberalisation and unification of member states' gas markets and to boost a more coherent EU common energy policy (Maltby, 2013). The completion of the EU Internal Gas Market has also been viewed as a key element in improving security of supply. A developed gas infrastructure network would allow redistribution of gas flows across the EU, having made the gas shortages of 2006 and 2009 less likely, if not impossible. Geopolitical concerns were also brought back to the EU agenda, having articulated the need to diversify gas supplies via the development of trans-European energy networks.

The overall EU market design is based on the idea that separation of activities is beneficial for consumers and the sector itself. The benchmark how this market should look like—non binding

criteria for achieving a fully functioning gas market—is the Gas Target Model, elaborated during interactions between various actors, including the Council of European Energy Regulators (CEER), the Agency for the Cooperation of Energy Regulators (ACER), the European Commission, national regulatory authorities, European Network of Transmission System Operators–Gas (ENTSOG), and various stakeholders. The confirmation that this model is not 'an end *per se'* is its revision to amend criteria and introduce new metrics for assessment of gas market functioning in 2015 (ACER, 2014a; CEER, 2014a; Posaner, 2014).

The idea of a state as a regulator with proper functioning wholesale gas markets has become the overall leitmotif of the liberalisation process. The cornerstone principles of GTM have become unbundling (separation of production, transmission, and distribution business from the VIC structure); hub-based trade with price formation at hubs; and better capacity utilisation without long-term booking. These changes were faced by objections of incumbents, but the Commission managed to push through the process, gradually applying EU competition law to the gas sector (Eikeland, 2011b; Talus, 2011a, 2011b, 2013).

The changes in gas market regulations, finalised in the Third Energy Package (TEP) of 2009, resulted in reconfiguration of the gas business organisation in the EU and required a sharp division between production, transmission and distribution. Even if the initial Commission's proposal was softened in the final draft, allowing three options of unbundling (full ownership unbundling, the independent system operator (ISO) and the independent transmission operator (ITO)), the market model designed to provide incentives for gas infrastructure as a separate business has been corrected with deeper involvement of the EU. The Energy Infrastructure Package, proposed in 2011, admitted that changes introduced by the TEP, including unbundling, the obligatory Third Party Access (TPA) and separation of transmission networks as business, required certain mitigation.

In order to proceed with the TEP completion and elaboration of technical and regulatory provisions in Network Codes, the ACER was created on the basis of the European Regulators

Group for Electricity and Gas (ERGEG) in order to complement the Council of European Energy Regulators (CEER), a coordinating voluntary association of energy regulators. The ACER and the CEER are tasked to enhance and monitor market liberalisation and to administer technical and regulatory rules for the Internal Gas Market (Lenzi, 2013, p. 16)

Internal dynamics of the EU sends mixed messages—member states do not share all initiatives of the Commission regarding redesign of gas market's institutions, and remain cautious to implement the new regulatory framework. They often opt to protect the main players of the gas industry (the so-called 'national champions') against liberalisation initiatives and to keep the well-established institution of LTCs in relations with non-EU suppliers. However, as empirical data of the Gas Target Model shows, the gradual convergence is likely to be slow but inevitable. The issue of organisation of the gas market is being transferred from the level of intergovernmental negotiations to the level of regulatory implementations, and the role of supranational supervision over implementation of market rules increases (CEER, 2014b).

Moreover, the EU model shows a certain retreat from the market design on the basis of the Anglo-Saxon regulatory framework towards growing supranational involvement and public intervention and greater inclusion of strategic considerations into the policy landscape (Esakova, 2012). The recent Energy Union initiative (European Commission, 2015b), apart completing the dream of speaking with a single voice (Glachant, 2014), initially included a proposal for a single gas purchaser in the EU, the consideration that rather contradicts market principles and creates inconsistencies in the EU 'market actor' model. Later, after consultations with stakeholders revealed their strong objections, as pointed by one of decision-makers, this idea was left on a voluntary basis.

3.2.3 Competition Rules

Competition law has become a tool for a supranational transfer of competences in the energy sector (network industries) that increased Commission's involvement into the sector (Eikeland, 2011b;

Talus, 2011b). Promotion of competition has been endeavoured also by enhancement of gas-to-gas competition and switching to gas hub pricing—implying that energy markets should be increasingly viewed as commodity markets without straightforward strategic implications. Competition is also to be ensured by the Third Country Clause—a transmission system operator (TSO) of any third country shall comply with EU rules of unbundling. This clause has invoked a lot debates about prospects of attracting new investments in EU transmission systems.

Historically, assertiveness of the Commission on liberalisation of gas market is explained by "the intricate division of competences between the EU and its member-states" that made the Commission "responsible for the internal market and liberalisation and therefore also for the external dimension of liberalisation" (Romanova, 2012, p. 34). Yet, it is also claimed that "the emphasis on 'solidarity' and the need to cooperate in the EU on a common external energy policy appear to serve the interests of the European Commission to acquire greater influence in external energy policy" (Schmidt-Felzmann, 2011, p. 593).

By far, the Commission has admitted that some projects, being commercially unattractive for private investments but essential for the completion of the EU Internal Gas Market, need EU support, especially in case of the small gas market. EU funding has been recognised as a need to boost the development of infrastructures—to attract private investments and to secure project risks. The development of infrastructures has been deliberated via the Projects of Common Interest (PCI), which require that at least two member states benefit from the outcomes of the proposed project, thus making cooperation between member states essential. EU funding has been expanded as well—the PCIs could be financed under the Connecting Europe Facility (CEF) in the period 2014–2020, while previously EU funds were mostly aimed to financing feasibility studies.

Thus, in order to be eligible to EU funding (up to 50 per cent of the costs for studies and works, 'in exceptional circumstances' up to 80 per cent for projects that are crucial for regional or EU-wide security of supply or solidarity, require innovative solutions or have cross-sector synergies), the projects have to prove that they are commercially not viable. In October 2013, the

list of 248 PCIs was approved by the Commission, allowing these projects to get faster through permit granting procedures and apply for financial support from the CEF under which a 5.85 euro billion budget has been allocated to trans-European energy infrastructure for the period 2014-20.

Post hoc alleviation of the flaws inherited in the EU gas market model sheds light on two major aspects. First, as has already been said, forging the EU regulatory framework should also coincide with the ability to mitigate divergent interests of various actors, both member states and their domestic economic groups. The Commission underlines that PCIs are to facilitate regional cooperation and to mitigate differences in interests of various stakeholders, as well as to optimise costs for infrastructure construction. However, this "top-down" promotion of regional cooperation appears to be slightly premature.

Second, practical implementations need to be elaborated more thoroughly as well. It is necessary to note that a clearer and more standardised methodology of the project evaluation (including Cost Benefit Analysis) has been introduced, aimed to improve the selection process as "a one stop shop" with the whole permit granting procedure not to exceed three years.

3.3 Interdependence and Different Domestic Institutions

The EU and Russia's domestic institutional models of the gas market, examined in the previous section, are shortly summarised here in Table 5.

Table 5. Domestic Institutions of the Gas Market in the EU and Russia

Issue Areas		**EU Model of the Liberalised Competitive Market**	**Russia's Model of the State-Controlled Natural Monopoly**
access to market	Norms	Liberalised market; non-discrimination	Resource nationalism; state control
	Rules	Legal reciprocity, EU level investment protection, the Third Country Clause	*Ad hoc* reciprocity, asset swaps, state licensing, a national mechanism of investment protection
the organisational model	Norms	The Gas Target Model (GTM); state as a regulator; unbundling	Natural gas monopoly; state as an arbiter; vertically-integrated structure

Issue Areas		EU Model of the Liberalised Competitive Market	Russia's Model of the State-Controlled Natural Monopoly
	Rules	The Third Energy Package, Framework Guidelines, Network Codes	Vertically-integrated companies, regional monopolies
the competition rules	Norms	Open competition; gas-to-gas competition; freedom of transit	partial production and export monopoly; inter-fuel competition; transit and export monopoly
	Rules	Hub pricing, no destination clauses, no Take-or-Pay, short-term duration, TPA, the Third Country Clause	Oil indexation, Take-or-Pay, destination clauses, long-term duration, domestic price differentiation

Interdependence between the EU and Russia in gas is clear: the EU extensively depends on Russian supplies (see Appendix 4 and 5), which cannot be completely replaced in the mid-term period (Stern et al., 2014). The models that existed in the EU and Russia before the changes of the 2000s created market conditions that triggered positive interdependence. However, their distancing during the 2000s provided incentives for further negative interdependence. Thus, domestic institutions affect market structures (including extensive diversification, construction of new LNG terminals, new interconnectors, and gas storages by both the EU and Russia) and reinforce disenchantment.

3.4 Economic Transformations of Gas Markets: a Post-2009 Gas World?

The interplay between markets and institutions is constitutive part of governance dynamics of gas markets. Institutions of gas markets are the results of absorption, assessment, and incorporation of changes in supply–demand patterns into institutional models through "historical processes, which form cultural and social perceptions of threats related to hydrocarbon interdependencies" (Belyi & Talus, 2015a). Adaptive strategies, policy changes, and shifts towards new practices are part of adaptation to and enhancement of economic changes in gas markets.

To large extent, debates about prevalence of either market or regulatory factors in governance dynamics are the 'chicken-and-egg' dilemma. Many interviewees have pointed to a complex interrelationship between these factors and to the crucial role a regulatory choice plays in

the assessment of market changes. This section looks at economic and technological changes,[17] which have been defined as "market factors" (Talus, 2013), a "post-2009 gas world" (Konoplyanik, 2014d), and "new market developments" (ECS, 2007, p. 34), and which have triggered a flux in gas markets worldwide and a need to consider adaptation of domestic and international gas governance practices to these market alterations.

First, the so-called shale gas revolution has led to a chain of events in gas markets, such as a closure of the US gas market, large volumes of LNG available in gas markets and in Europe, and institutional transformations in gas markets. Second, LNG technological developments and a boom for LNG terminals construction in the USA, Australia, and Africa have significantly eased transportation of natural gas across the world and prompted further convergence of gas markets in North America, Asia, and Europe. Third, the economic recession and the Eurozone Crisis have significantly decreased gas demand in Europe.

Acknowledging "commercial and regulatory complexity" of the European gas market (Stern, 2014a, p. 104), this section analyses how these market changes have affected the EU and Russia's models. Thus, it is argued that old contractual structures, such as long-term investment schemes in the form of oil-indexed LTCs, are experiencing pressures from market forces; and a regulatory choice for the hub-based model is gaining increasing allegiance from economic fundamentals of ongoing gas market developments. These changes have also invoked reassessment of interdependencies between actors in gas markets and have reinforced negative trends in EU–Russia gas relations (Kratochvil & Tichy, 2013), invoked by the diverging EU and Russia's institutional choices.

[17] New technologies can alter previous estimations; for example, new fields can be discovered or resources can be extracted from the fields previously considered to be unreachable. For example, new technologies helped discover the Western Siberian gas fields during 1960–1970; the combination of horizontal drilling and fracking technology led to the shale gas revolution during 2007–2011. Moreover, environmental changes may contribute to the re-estimation of resources: resources of the Arctic Circle are likely to be reachable in some decades due to climate changes.

3.4.1 Transformation of Gas Markets in Place? A Post-2009 World

The importance of energy resources for the modern industrialised world is difficult to be overestimated. Energy is "a crucial and basic input to our economies, determining the competitive position of nations and its industries and welfare" (van der Linde, 2007, p. 275), and "one of the fundamental factors of production, comparable in importance to labor, capital, technology, and commodities in the satisfaction of human needs" (Bressand, 2013, p. 15). An estimated increase in the world energy demand is expected largely due to non-OECD countries (up to 90 per cent), especially to newly emerging economies such as India and China (BP, 2013, p. 9; Goldthau & Witte, 2010, p. 10).

While coal and nuclear energy are subject to growing environmental concerns, fossil fuels are argued to remain one of the leading sources in world energy production at least for the next decades (IEA, 2010, p. 4; 2014b), also in the forefront of sustainable energy transition (ACER, 2014d). With a promising "bright future" (IEA, 2011b, p. 4), natural gas is widely viewed as "the fuel of choice for the decades to come" (Hulbert & Goldthau, 2013, p. 98). The upcoming "golden age of gas" announced by the International Energy Agency (IEA, 2011a) has been supported by other agencies. Natural gas is estimated to become the fastest growing energy source by 2030 in absolute terms (BP, 2013, p. 11) or among fossil fuels (ERIRAS, 2012b, p. 61).

Recent technological and economic changes in gas markets have altered widespread forecasts about increasing competition over scarce energy resources in line with the Peak Oil Theory and looming import dependence of consumers (van der Linde, 2007; Yi-chong, 2006, p. 272). Despite there is no consensus regarding trends in international gas markets,[18] many experts agree that gas markets are in flux nowadays (Goldthau & Witte, 2010; Konoplyanik, 2012b; Stern, 2006).

[18] This study does not aim to evaluate the validity of various scenarios and prognoses—instead, it just indicates the major trends of gas market developments, presented in the reports of leading energy agencies. Intricacies of statistic data assessment are discussed in the research design chapter.

Abundance of natural gas in international gas markets has been facilitated by at least three factors: the vast developments of the shale gas industry in the USA; availability of free volumes of LNG due to the closure of the US gas market and development of gas liquefying technologies (van der Linde, 2007, p. 298); and decline in energy demand in Europe due to the economic crisis.

The first and the most contested factor is the shale gas revolution—a clear example of a path-breaking technology that combined two already existing technologies of fracking and horizontal drilling as a result of persistent work by prophet of shale gas George Mitchell. In 2006, extensive drilling started in the USA and in just two years later stopped nearly any US gas import. This completely revoked prognoses on a future of the USA as the largest gas importer, such as the one by Yergin and Stoppard (2003). The US Government has already issued several licenses for the construction of LNG exporting terminals for shale gas, and shale gas production is steadily growing in the USA (Davis, 2014; EIA, 2014). Being an effective technology, fracking, however, has raised numerous concerns about technological safety and environmental issues and has been banned in a number of states (Clarkeb, Bugdena, Maibachb, Roser-Renouf, & Leiserowitzc, 2014; Johnson & Boersma, 2013). Pros and cons of shale gas extraction also vary across EU member states, ranging from proactive policies in Poland to a legal ban in France, while the European Commission presented a Recommendation (European Commission, 2014a) "to clarify the conditions under which fracking can take place, while imposing no ban on them" (ACER, 2014b, p. 168).

Despite methodologies of assessment of shale gas reserves vary, prospects of shale gas reserves are rather optimistic around the world, as for example the report by EIA (2013) demonstrates. Recently launched projects about shale gas developments in various countries, such as the project Shale Gas Developments in China by Centre on Global Energy Policy at Columbia University (Sandalow, Wu, Yang, Hove, & Lin, 2014), also prove growing interest in the field. The shale gas revolution is a revealing case of how technological innovations reconfigure economic credentials and posit a need to institutional adaptation. It also points how technological

developments can radically change a supply–demand pattern in gas markets and invoke an increasing merge between a regulatory choice and actual market structures.

The second factor that facilitates internationalisation of gas markets is developments in LNG technologies that make construction of LNG facilities less costly. LNG trade started in 1960s between Algeria, France and UK, and in the 1970s, the USA started importing gas from Algeria. However, since LNG used to be extremely costly, its imports to Europe and the USA were soon replaced with cheaper pipeline gas from the Netherlands and cheaper local gas respectively. During the late 1990s, LNG supplies to Europe came sporadically from Trinidad and Tobago, Nigeria, and Qatar (Herrmann et al., 2010). A recent decrease in LNG costs facilitates "more flexibility with regard to off-take obligations and destination" for LTCs (ECS, 2007, p. 34) and emergence of LNG spot trade (Belova, 2013; Herrmann et al., 2010, pp. 202-219).

Third, the economic crisis and recession in Europe decreased gas demand[19] and ended in 2005 "the golden age of gas' in Europe" (Stern, 2014c, p. 52): oil indexed prices of LTCs became too costly for European energy companies, especially in the presence of cheaper available options of LNG supplies, redirected from the USA to other parts of the world. Gas volumes to be consumed and paid for according to TOP clauses of European LTCs turned out to be too expensive and excessive in light of decreasing gas demand in Europe. Moreover, cheaper coal, available in the world market after the US coal demand was substituted with US domestic shale gas, and electricity production from subsidised RES in the EU provided an attractive alternative to gas in Europe (ACER, 2014b, p. 165).

Uncertainty and ongoing transformations of gas markets in Europe are "both a crisis and a transition" (Konoplyanik, 2010, p. 6). As Stern (2014c, p. 54) argues, "these developments could be considered a short-term discontinuity caused by a coincidence of unusual events (recession, subsidised renewables, and cheap coal), or could be heralding the start of a secular decline of gas in

[19] EU gas demand decreased by 1.2 per cent in 2013, 2.2 per cent in 2012, and 10.5 per cent in 2011; for changes of gas consumption per member state, see Figure 67 in ACER (2014b, p. 165).

European energy balances". Shifts towards new institutional configurations in gas markets provide incentives for institutional models to adapt because they, being nested in market structures, are either converging with the market structures or are challenged to adapt to them. These alterations create ever further turbulence in EU–Russia relations since, at least before 2020, no replacement or significant reductions of Russia gas supplies are economically feasible (Stern et al., 2014).

3.4.2 A Momentum for the EU Model?

The discussed changes in gas markets facilitate a greater convergence of interests of the gas industry and policy-makers in the EU model. They have increased price arbitrage between spot prices at US Henry Hub and NBP (UK) and prices of LTCs in Europe since 2008[20] (ACER, 2014b, pp. 167-168) and triggered a need of adaptation for EU energy companies. Price arbitrage—a difference between spot and LTC gas prices—and availability of LNG volumes at lower spot prices, coincided with the economic recession in Europe and made hub forms of pricing increasingly more attractive for commercial players[21] (Stern, 2014c, pp. 55-57). These "commercial change" (Stern, 2014c) has invoked requests by European energy companies for amendments in established LTC practices, and "energy industry" has started reassessing their long-term commitments to suppliers, such as Gazprom, requiring more flexibility in gas trade (Talus, 2013, p. 231).

During last several years, European companies succeeded in renegotiating the TOP percentage in various upstream contracts (including those of Gazprom): percentages were lowered and penalties for TOP infringements were cancelled on *ad hoc* basis through bilateral adjustments or international arbitration procedures. Gazprom has already revised TOP tariffs with Wingas (Germany), GDF Suez (France), EconGas (Austria), SPP (Slovakia) and Sinergie Italiane Srl (Italy). In this regards, the decisions by the Vienna International Arbitration Centre for the case RWE Transgas *vs.* Gazprom, ruled in favour for the Czech company, might become a benchmark for similar cases (LNG World News, 2013; RT, 2012). The arbitration decision justified the refuse

[20] However, since March 2013 NBP prices and prices of LTCs at German border demonstrate signs of convergence, see Figure 68 in ACER (2014b, p. 167) and BP (2014, p. 27).
[21] For price dynamics, see Appendix 3.

of RWE Transgas to pay TOP fines to Gazprom for unconsumed gas during the period of 2008–2011.

The statement of the new Chairman of the Board of Management of E.ON Rurhgas in August 2010 became "a major milestone" in these debates—he announced that "E.ON has moved against the continuing oil price linkage and that the current long-term contracts with this linkage need to be adjusted" (Talus, 2011a, p. 286). Consequently, E.ON was engaged in negotiations with Gazprom regarding the oil indexation and subsequently attained a linkage of a "small double-digit percentage" of gas deliveries to spot market prices (Gronholt-Pedersen & Hromadko, 2010).

Increasing attractiveness of hub trade for commercial players in the EU, their shifts from LTCs and the oil-indexation towards hub pricing (ACER, 2014b, pp. 167-168) coincided with "two decades of continuous regulatory changes" by the Commission, including *inter alia* developments of the Gas Target Model (CEER, 2011) and the EU Infrastructure Package (EU, 2013), that were consistently enhancing the consolidation of regulatory choices and interests of commercial players (Talus, 2013, pp. 231-239). Such consolidation is likely to allow market structures of the EU internal energy market to emerge, making compatible the Gas Target Model's benchmarks with the actual conditions of the market.[22]

The situation in energy markets is favourable for further changes towards greater incorporation of hub prices in price indexation formulas, and while LTCs remain significant part of gas trade in Europe,[23] increasing shifts towards more flexibility are inevitably taking place (Talus, 2011a, p. 286). Some external suppliers have already started shifting towards hub-indexation of gas prices,[24] Gazprom compromised on prices having narrowed the gap between spot and LTC prices

[22] Certain price convergence is already noticeable in day-ahead, month-ahead and season-ahead pricing in major European hubs, for details, see e.g., ICIS (2014a, p. 44) and ACER (2014b, pp. 172-174).
[23] During 2006–2008, the following LTCs were prolonged: Gaz de France (France)—up to 2031; E.On Rurhgas (Germany)—up to 2035; OMV (Austria)—up to 2027; ENI (Italy)—up to 2035; RWE Transgaz (Czech Republic)—up to 2036, with increase of volumes from 7.5 to 9 bcm since 2010; Wintershall (Germany)—up to 2030; Gazum (Finland)—up to 2025; Conef Energy (Romania)—up to 2030.
[24] Statoil of Norway and Shell of the Netherlands were among the first to do it in the European market, downward pressure on prices forced also Sonatrach (Algeria) to make concessions towards greater flexibility on TOP (ACER, 2014b, p. 173; Darbouche, 2011) .

but rejected the possible shift to gas hub pricing. Thus, in 2011–2012, a number of disputes between Gazprom and European gas companies on prices were handled to international arbitration (Talus, 2013). The gradual shifts towards market integration show, as Talus (2013, p. 239) notices, that "markets have finally started to embrace the changes and opportunities the new regulatory framework can provide".

3.4.3 The Russia's Model—A Need of Adaptation?

The discussed changes have also invoked debates in Russia about ways to address changing market conditions (Kropatcheva, 2014). The Russian expert community was rather polarised in assessments of these changes, especially of US shale gas developments and their implications for Russia and its energy companies. Opinions ranged from optimistic considerations that these changes are of short-term impact and do not affect institutional organisation of gas markets (Geller & Melnikova, 2010; Grushevenko & Melnikova, 2014; Oilru.com, 2010) to the alarmist leitmotif "we have overlooked both the TEP and the shale gas", which was pointed in several interviews in Moscow, and acknowledgements that shale gas is an important game-changer in the gas world (Ivanov, 2014)

The official position of Gazprom remains unchanged—numerous publications in Gazprom Magazine and public statements by Gazprom's officials have consistently claimed that shale gas production has been gradually falling, thus being unable to alter positions of key players in gas markets (Gazprom, 2013; Magazine, 2014; RIA, 2009). Decision-makers and Gazprom officials consistently downplayed developments both in shale gas (Nezavisimaya Gazeta, 2014; Osipov, 2012) and in oil shale (Bulin, 2013).

These changes have, however, inevitably affected Russia, but the extent of this impact is yet to be assessed and widely debated both domestically and worldwide in academic and expert communities. Thus, Jonathan Stern (2014c, p. 42) from the Oxford Institute for Energy Studies (OIES) argues that "changes in market conditions, and in particular price dynamics, are the drivers

of overall Russian gas development". Henderson and Pirani (2014, p. 1) underline that "the pre-crisis certainty of steadily rising demand in the main markets for Russian gas came to an end. Pricing trends and regulatory regimes in Europe…have changed dramatically". At least, all Russia's plans to export LNG to the USA, mostly from the Shtokmann field, became unfeasible after the shale gas revolution (Feygin, 2003; Simonia, 2004; Simonov, 2005, pp. 252-255).

In April 2012, President Putin admitted that the shale gas revolution became reality and required evaluations of its consequences for Russia (President of Russia, 2012; RBK, 2013). Irrespectively from considerations of policy-makers and stakeholders, shale gas developments are likely to have serious impact on Russia's gas pricing strategy, creating a more competitive environment in gas markets and decreasing prices worldwide (ERIRAS, 2012a; Nikolaev, 2014). New realities forced Russia to compromise a number of previously untouched aspects of the institutional model—LNG export was liberalised to boost competitiveness and Gazprom's unbundling was widely discussed, an issue impossible even a couple of years ago (Stern, 2014c, pp. 46-47). Gazprom had also to revise its previous strategy and to increase the share of LNG in its investment portfolio, including Vladivostok and Sakhalin LNG projects (News.Ru, 2013). However, both projects raised concerns about their competitiveness with other LNG projects across the world (Henderson & Stern, 2014).

Pipeline gas exports monopoly of Gazprom is under pressure since independent producers request permission to export pipeline gas and to get access to Gazprom's transmission system (Belyi, 2013b). Latest news is contradictory but Gazprom's monopoly is openly discussed and challenged by Rosneft and Novatek, another important domestic players that look for a greater share in domestic gas market; and the Government is more and more reluctant to avert such debates (Papchenkova & Serov, 2014; Serov, 2014a, 2014b).

The Government's intentions to preserve—with limited adaptations—the strategy of infrastructure dominance and transit avoidance externally couples with unclear messages to the domestic players. Thus, despite the contract with China signed in May 2014, implies a complex web

of governmental support, the State opted for a 'hands-off' approach in the debates between Gazprom and Rosneft. A step towards market liberalization in Russia might not only have limited effect in case it is driven by internal struggles, but can also destabilise Russia's external strategy in case the symbiosis of state-gas relations is destroyed.

Falling spot prices and shale gas developments have challenged commercial sustainability of Russian production and contracts in Europe and in Asia—even the contract with CNPC, finally signed in 2014, raises concerns about its profitability. The gas price, not disclosed but calculated by experts, is around $380 kcm, dangerously close to the lowest level of profitability (Milov, 2014). Moreover, an extensive pipeline, Power of Siberia (*Sila Sibiri)*, should be built in order to deliver gas to China, and this project requires investments which might be unavailable under sanctions introduced by the EU and USA in 2014. Moreover, the oil indexation is consistently preserved by Gazprom as a way to formulate gas prices, providing rather questionable grounds for inter fuel competition (Gazprom, 2014b).

These changes have invoked shifts in the institutional models of the gas market in Russia—a complex balance between state control and a need of liberalisation of the domestic sector; between state involvement in commercial activities of companies and greater independence of commercial players, and between preservation of the oil indexation and key elements of LTCs and greater flexibility towards market changes. Inconsistencies between governmental strategies externally (including the contract with China and Russia's position regarding the ECT) and domestic developments (liberalisation in the weak informal institutional framework accompanied with tensions between interest groups) witness ongoing changes in institutional structures of the Russian gas sector.

Conclusion

This chapter has revealed significant differences between the EU and Russia's institutional models. Two opposite trends in organisation of the gas market became evident during the 1990s: while the EU started gradually moving towards the model of the liberalised gas market, Russia opted to preserve a vertically-integrated monopoly with greater state involvement.

In the early 1990s, Europe's 'lost decade' of the 1970s seemed to be overcome. In 1991, the Treaty of Maastricht created the EU, adding two new pillars—Common Foreign and Security Policy (CFSP) and Justice and Home Affairs—to the European Economic Community. From the beginning, energy was the cornerstone of European integration—the Treaty of European Coal and Steel Community and the Euratom Treaty sought to tight France and Germany in steel and coal industries, which were crucial in post-war economies, and to create common nuclear safety standards and investment regulations. However, despite the importance of energy for European integration since its very beginning, energy remained one of the most politically sensitive areas of integration. Until the 1990s, most member states opposed any significant developments in this area and the trend of bilateral relations between member states and key suppliers persisted, backed by LTCs between member states' 'national champions' and national companies of suppliers.

The late 1980s signalled a consistent, yet slow, endorsement by the European Commission of liberalisation policy in electricity and gas markets aimed to breaking up vertically-integrated companies (VICs) of member states and to interconnecting national markets. These reforms, conducted according to the Anglo-Saxon neoliberal regulatory approach, were directed to a completely new gas market design for the Continental Europe. They were based on the idea of introduction and enforcement of competition in the vertically-integrated network industries. Unbundling of the gas industry, regulated access to infrastructure, and enforcement of regulatory authorities were the major aspects (Finon and Midttun 2004, p. 1). A gradual transfer of existing practices of EU competition law towards the gas sector allowed a rather fierce reinforcement of competition practices in the gas industry. However, a clear shift towards more public intervention

and understanding that 'markets cannot do it all' led to reinforcement of provisions in investment planning in gas infrastructure, expressed in various forms of financial support for projects and development plans in complex coordination with market actors.

Opposite to EU liberalising trends, the Russian gas sector escaped the radical harsh market reforms of the early 1990s. While the oil sector undergone certain decentralisation and privatisation during the 1990s, the institutional organisation of the gas sector was left mostly untouched—the Ministry of Gas was smoothly transformed into Gazprom (Belyi, 2013b, pp. 172-175). The gas sector preserved its major features of command economy institutions under the regime of state-controlled 'natural monopoly' that restricted competition—a vertically-integrated structure and export and transit monopoly were viewed as *de facto* prerogative by Gazprom, transformed into *de jure* monopoly by the Federal Law in 2006. Since the late 1990s this trend has strengthened, with further 'interventionist' state-involvement in the gas sector, especially from the second presidency of Vladimir Putin in 2003 (Milov, 2005a, p. 23).

Resource nationalism with a strict control by the government, greater involvement of state-controlled companies into various projects with foreign investors, and reinforcement of the use of various tools for licensing and technical expertise (direct state intervention) as practice of control and supervision of the sector in line with national security was definitely in conflict with the concept of legal reciprocity, advocated by the EU. The issues of investment protection have demonstrated differences as well. Russia has moved towards the prevalence of domestic law in dispute settlement, whereas the EU has gradually shifted practices towards *sui generis* understanding of EU law and its prevalence over international agreements.

Regarding organisational models of the gas market, the EU and Russia have showed different practices as well. Growing state involvement into the gas sector, preservation of the exclusivity of Gazprom and its transmission and export monopoly contradicted EU initiatives to create a competitive gas market with separate transmission and distribution business, independent from production.

Since "Russia's main object is to ensure security of demand" in Europe (Locatelli, 2013, p. 4) in order to receive export revenues, any changes to price formation that will decrease Russia's control over the pricing mechanism contradict domestic institutions of the gas sector in Russia. Therefore, preservation of key aspects of contracts and pricing mechanisms that guarantee in Russia's view security of demand becomes a matter of power relations for Russia, which are discussed in detail in Chapter 4. While certain steps towards greater competition and liberalisation took place in Russia, including several projects for reform of the domestic gas market and creation of the domestic wholesale market, and introduction of the negotiated TPA provisions in the Russian legal space; norms about natural transmission monopoly persist and invoke inconsistencies in the application of formal rules.

Alterations in the domestic models also provide uncertainties to stakeholders, as in the case of the revision of the Gas Target Model and increasing public (supranational) intervention in the EU, and unclear signals regarding liberalisation of the gas sector in Russia. Progressing distancing by the EU from a 'pure' market actor towards greater public intervention and reinforcement of the strategic dimension externally, such as the Energy Union, which was finally propelled to the EU agenda in the end of 2014, send unclear signals about institutional transformations of the EU model.

This chapter has also discussed changes in market structures due to economic and technological developments that have affected the EU and Russia's models of gas markets. These market transformations are likely to move towards further internationalisation of gas markets and institutional re-organisation of markets towards increasing a share of spot contractual structures and hub-based gas trade. These changes have facilitated further convergence of interests between commercial players (energy incumbents) and supranational policy-makers in the EU, since facing higher LTC prices with high TOP percentage, energy companies seek to renegotiate these provisions with their upstream partners. Acceptance of the EU model of the liberalised gas market with hub trade by stakeholders has been increasing because this model has started reflecting their interests to lower gas prices. At the same time, these market changes have been forcing Russia to

adapt as well and to make a number of concessions regarding prices and TOPs. Moreover, changes in international gas markets have invoked domestic debates in Russia, which have questioned Gazprom's transmission and export monopoly and high state involvement in the gas market. Development of a truly internationalised gas trade with natural gas as a globally traded commodity will depend also on the degree to which emerging market structures are internalised in institutional models of key players.

CHAPTER 4. TWO INSTITUTIONAL MODELS OF THE GAS MARKET AND EU–RUSSIA GAS RELATIONS

This chapter proceeds with analysis of EU–Russia gas relations in a dynamic perspective as "the product of the confrontation of [the] … two different models" (Locatelli, 2013, p. 2), which have been discussed in the previous chapter. First, this chapter provides an overview of how these relations developed along changes in the domestic models, and which focal points, or "institutional shocks" (Rossiaud et al., 2012), were crucial in these developments. It offers a historical overview of relations between the EU (then Western European countries) and Russia (then the USSR) in the European gas market, tracing the evolution of regulatory frameworks in the European gas market from the first Soviet oil and gas supplies in the late 1950s to the changes introduced by the Third Energy Package in the late 2010s. It discusses how along deepening of these interactions new issues appeared on the scene, and how they were incorporated into the existing framework of energy governance.

Second, the chapter traces the emergence of two models under discussion after the end of the Cold War and shows how their differences became the problematic issue between the EU and Russia in the 2000s. The chapter discusses how domestic models provide incentives for promoting certain rules and norms in relations with other actors and how actors agree on which model shall become a benchmark for institutionalised arrangements in gas markets. The chapter follows with a more detailed analysis of the main conflictual issues that have transformed into an issue of contention between the EU and Russia. It also discusses to what extent disagreements over these issues have been affected by domestic institutions.

4.1 The Cooperation–Conflict Nexus and Positions of EU and Russia: Identifying Focal Points

The EU–Russia gas relations are examined in this chapter through the lenses of their institutional developments. Domestic models create a set of incentives for actors to accept or discard various governance provisions proposed in the international arena. Rossiaud *et al*. (2012, p. 17) define two "institutional shocks" during the 1990s which destabilised the EU–Russia gas trade—first, implementation of a new institutional framework in the EU, which was in line with "the principal regulations contained in the regime introduced in the 1980s at the international level"; and, second, Russia's transition towards market economy after the collapse of the USSR. These changes opened "a period of instability, or at the very least of conflict relative to the organisational and institutional framework structuring the interdependence between Russia and the EU" and placed these two models "in opposition at international level for defining the norms and standards structuring the organisation of the industry and the interdependence between EU and Russia" (Rossiaud et al., 2012, pp. 2-3).

The study slightly adjusts this conceptualisation of institutional shocks and adds the institutional 'shock' of Russia's drawback towards state capitalism and enhancement of the concept of natural monopoly in the early 2000s. The early 2000s are identified as the period when the EU and Russia's models started moving in the opposite directions, towards the liberalised gas market and towards the state-controlled monopoly respectively. This divergence, in turn, is argued to have produced "instability and uncertainty concerning the EU–Russia gas exchange in spite of the economic interdependences" (Rossiaud et al., 2012, p. 22).

Accordingly, this chapter identifies three periods of these relations which are marked with two focal points of alterations in relations due to domestic changes and developments. The first focal point—the end of the Cold War, the USSR dissolution and a need to reassess relations in the gas market—marks widespread aspirations for multilateralism on the basis of neoliberal ideas, which were generally shared both by the EU and Russia. The second one is the early 2000s, the period of drawbacks from multilateralism and increasing state involvement into the gas trade both

in Russia and the EU, accompanied with a steady promotion of EU gas market model in the neighborhood through various initiatives and policies.

4.1.1 The Gas Models Compatible: USSR Energy Supplies to Western European Countries, 1960s to 1980s

The first period (the late 1960s–the 1980s) covers the beginning of Soviet gas supplies to several Western European countries. During this period, natural gas started acquiring a greater share in energy mixes of European countries, slowly replacing coal as a second-choice energy source after oil. Growing environmental concerns in Western Europe facilitated the recognition of natural gas as a cleaner energy source in comparison to coal. To some extent, this happened also due to the Dutch Government's policies of natural gas promotion, aimed at gaining a market share both in the Dutch and European markets for gas from the recently discovered large gas field next to Groningen.

Initially, gas supplies from the USSR were not considered both in Europe and in the USSR as a serious alternative to oil supplies from the Middle East. Many Western European countries imported oil mostly from the Middle East and natural gas from Algeria and the Netherlands and expected that these suppliers would satisfy growing European gas demand, and therefore did not consider the USSR as an important gas supplier to Europe. There was also no unanimity about launching gas exports to Western European countries in the USSR (Hogselius, 2013). Before the 1960s, when several large gas fields were discovered in the Western Siberia, such as *Urengoy* in 1968, most of Soviet gas reserves concentrated in Central Asia. There was no consensus in the Soviet Government about the development of Western Siberian gas fields and the launch of gas exports to Europe. Western Siberian gas fields were located in the remote, hard-to-reach regions with extreme weather conditions, and required the construction of lengthy and expensive infrastructure to connect to domestic and foreign consumers. Large-scale gas export was considered risky, since "natural gas demanded a dedicated export infrastructure that would have little alternative use, should the West suddenly decide to withdraw from the project" (Hogselius, 2013, p.

223). However, the proponents of gas export in the Soviet Government finally won, and large construction of lengthy gas pipelines began (Hogselius, 2013). This endeavor required cooperation between the USSR and Western European countries not only because the USSR often lacked necessary technologies, but also because it did not have capacities to produce the required quantity of pipes under a very tight schedule.

The decision to start negotiations in the late 1960s was influenced by environmental concerns in Western European countries, their tensions with some energy producers, such as Algeria, and growing energy demand in Europe. After domestic debates, in 1966 the Soviet Government finally decided to penetrate the Western European gas market and started negotiations with Austria, Finland, France, and Italy. The extensive infrastructure had to be built from scratch and the parties had to elaborate rules and practices of their interactions, as well as to show their reliability to each other—for the USSR, it meant to deliver agreed volumes of gas, for European customers—to pay for them. Interestingly enough, the USSR "was so obsessed with the need to ensure its Western partners of its reliability as an exporter that the country's own gas users were left to freeze when sufficient gas was not available" (Hogselius, 2013, p. 6).

During this period, the major decisions about the construction of lengthy and extremely costly infrastructures from scratch, often in very tight periods, were taken and the scheme of cooperation was developed—Soviet gas was often supplied in exchange for pipelines and technologies, which were required for construction of gas infrastructures. During this period, two models witnessed rather high institutional compatibility. Indeed, in order to make possible the development of new gas fields in the USSR and the construction of lengthy infrastructures to connect remote fields in Western Siberia with consumers in Western Europe, practices of the Groningen-type long-term contracts (LTCs) were adapted to contracts between the USSR and Western European countries. Indeed, LTCs were viewed as the best option to ensure long-term investments in the Soviet upstream development, to secure required volume of gas supplied, and to share risks of infrastructure construction and gas trade development.

For many years, LTCs became the main form of the organisation of the gas trade in the Continental Europe—they guaranteed agreed volumes of gas to be supplied by the USSR and purchased by the Western European countries. Given political division of Europe and vertical integration of gas sectors in both Western European countries and the USSR, gas was delivered at the Czech–German and the Slovak–Austrian borders (Waidhaus and Baumgarten delivery points), and issues of gas transit were not on the agenda.

Natural gas remained a residual energy source until the mid-1960s. Since so-called associated gas was usually a by-product of oil production, it was hardly considered an independent energy source. Moreover, incremental developments of nuclear energy and the confident positions of coal in Europe left little chances for natural gas to a more significant share of the European energy markets. The situation changed during the 1960s, when in 1958 the vast Groningen gas field was discovered in the Netherlands. In order to get a decent market share, natural gas had to displace other complementary sources, such as oil and coal, both in the domestic and international markets. Considering the gas sector strategically important for the country's economic development, the Dutch Government worked out a new concept of gas pricing that was designed to facilitate the consumers' switch from other energy sources to natural gas. Elaborated in 1962 by Minister of Economic Affairs Jan Willem de Pous, this concept became known as the Nota de Pous (ECS, 2007, p. 147). It introduced a new gas pricing mechanism that completely differed from the existed Cost Plus (Net Forward).

According to Cost Plus (Net Forward), the gas price is defined as the sum of all costs of production plus the profit for producers. Contrary to this pricing mechanism, the Dutch Government introduced the concept of value replacement. Thus, gas price was to be linked to the price of alternative energy sources—mostly, gas oil for small-scale users such as households, and fuel oil for large-scale users such as industry. Accordingly, "the market value principle meant that consumers would not have to pay more for gas than for alternative fuels. On the other hand, they would not pay much less" (ECS, 2007, p. 147).

The combination of replacement value with the netback pricing mechanism allowed not only 'advertising' natural gas among other alternative sources with its competitive price, but also increasing the profit share of producers in comparison to the traditional Cost Plus. As Konoplyanik (2009b, p. 447) argues, "the concept was driven by the Dutch Government's desire to maximise resource rent—or rather a specific part of the rent, the so-called 'Hotelling rent'—from the development of that uniquely sized field….The intent of the new policy… was to generate maximum revenue for the gas-producing country in the long term".

Newly elaborated concept of long-term contracts (LTCs) was aimed to ensure stability and predictability for both a consumer and a producer, since the development of gas fields required large investments. Therefore, LTCs were tasked to be a long-term investment project: producers invested in infrastructure construction and needed to be sure that their product would be sold, and consumers needed guarantees that certain volumes of gas under a predictable price would be supplied. During the 1960s, the Netherlands concluded a number of LTCs with France, Belgium, and Germany, and in 1971 with Italy and Switzerland. This scheme of risk division between a producer and a consumer was named the Groningen-type contract:

> The concept of long-term contracts aimed at maximising the rent income of the exporting state, while keeping the gas marketable, or in other words the seller (the exporting country) was taking risks and chances of price development via the replacement value pricing concept, while the buyer was taking the obligation to market a defined volume via the minimum take-or-pay obligation against earning a satisfactory margin (ECS, 2007, p. 143).

This Groningen-type contract became a benchmark for contracts signed between the USSR and those Western European countries that opted to negotiate gas supplies with the USSR during the 1960s. In 1968, the USSR signed its first gas supplies contract—Austria became a pioneer in Soviet gas supplies to Western Europe. Ironically, after the end of the World War II, the USSR shipped oil supplies from Austria to the East by the Soviet Mineral Oil Administration in the country. After signing in 1955 peace agreement, the USSR left the country, but oil supplies were agreed for next

ten years. Starting with the first gas contracts between Austria and the USSR, increasing imports from vast 'supergiant' gas fields outside Europe signaled the trend of gas market developments in the Continental Europe (Hogselius, 2013).

In 1965, negotiations started between Italy and the USSR: Italy was one of the first proponents of cooperation in the oil and gas sectors with the USSR, even despite growing disapprovals by the USA. To large extent this search for cooperation was promoted by Enrico Mattei, then the president of ENI. Thus, in 1958, despite the objections of the Anglo-American international oil companies (IOCs), ENI concluded a historical agreement for oil supplies with the USSR. Enrico Mattei dared to start importing Soviet oil as part of company's diversification strategies. In 1960, ENI and the USSR signed another very important contract. Accordingly, the USSR agreed to export 12 mln tons of crude oil within next four years in exchange for 240 thousand tons of large diameter pipes and other pipelines equipment and for 50 thousand tons of synthetic rubber. Since the conclusion of this agreement, Italy became an important energy partner of the USSR, and later Russia.

In 1965, ENI and the Soviet Ministry of External Trade signed a memorandum of understanding: ENI agreed to provide materials and equipment for pipeline construction in exchange for gas supplies. The negotiations, however, were stalled until 1969 due to both the sensitive international situation and the project's complex technical details. Initially, the pipeline was supposed to be built through the territory of Hungary and Yugoslavia. Later, it was moved to Czechoslovakia and Austria. In 1969, the agreement was reached: during next 20 years, the USSR was obliged to supply more than 100 bcm of gas to Italy. In exchange, the USSR was to receive a 200 mln dollar credit for buying pipes and technologies for the gas industry from Italian companies. Gas supplies to Italy began in 1974.

First deliveries of Soviet gas to Austria were launched in 1968; to West Germany, Italy, and Finland in 1973–1974; and to France in 1976. The USSR tried to speed up pipeline construction at any costs in order to fit into tight schedules. This strategy inevitably led to numerous technical

failures and accidents from the Soviet side, mostly because infrastructure objects were built with infringement of technical standards by unprofessional workers and conditionally released prisoners. In case of such incidents, the Soviet government opted to leave its own domestic consumers without gas supplies, in order to fulfil its export obligations.

The German-Soviet 'Deal of the Century' and large-scale increase of Soviet gas supplies

After World War II and subsequent division of Germany, the Soviet–German relations were understandably not in their best conditions. However, the importance of cooperation was clear for both parties: the USSR needed new technologies and equipment, West Germany looked for new markets for its industrial goods. Already in 1952, the Eastern Committee for Economic Cooperation with the East was created in West Germany. Since German business looked for new opportunities, cooperation gradually expanded. However, this closer cooperation, often in the areas very sensitive to national security issues, was not much welcomed by the country's allies.

This happened with the agreement to supply large diameter pipes between the USSR and German steel companies, primarily, Mannersmann, signed in the early 1960s. In 1962, after the Cuban Missile Crisis, the USA introduced economic sanctions against the USSR and, in November 1962, lobbied NATO embargo of large diameter pipes' supplies to the USSR.[25] While several NATO-members, such as the UK and Italy, refused to support this embargo, the government of the West Germany required their steel companies to terminate their contracts with the USSR. This embargo seriously hurt German companies—only Mannesmann lost around 80–100 mln marks—and the Government decision was highly criticised in German business circles. This widely shared dissatisfaction is argued to have contributed to political changes in West Germany. As a result, in 1969, social-democrats won elections and Willy Brandt, the proponent of *Ostpolitik* and closer ties with the USSR, became the federal chancellor.

[25] This embargo forced the USSR to speed up its own production of large diameter pipes: in the end, NATO sanctions delayed the construction of the Friendship Pipeline only for one year; its first line was launched in 1964. In 1969, this NATO embargo was removed.

Shortly after that, in February 1970, the USSR and West Germany signed an agreement for gas supplies—around 3 bcm per year—with Rurhgas in return to 1.2 mln tons of large diameter pipes to be supplied by Mannesmann. This agreement was named 'The Deal of the Century'. On October 1, 1973, the extended line of the pipeline was officially opened in Waidhaus, on the border of German Bavaria and Czechoslovakia, and Soviet gas supplies reached 4.9 bcm per year.

During the 1970s, oil and gas became the main part of trade between the USSR and several countries of the European Economic Community. This obviously led to a misbalanced structure of trade exchange: around ¾ of Soviet export was oil and gas, export from Western Europe (mostly Italy and West Germany) consisted primarily of technologies and equipment for oil and gas industries. Increasing volumes of gas trade corresponded with the rapid development of the major parts of Trans European energy system. To Germany, Soviet supplies were delivered at the German–Czech border in Waidhaus (to *Mittel-Europäische-Gasleitung*, MEGAL), to Austria—at the Austro–Slovakian border in Baumgarten (to *West-Austria-Gasleitung*, WAG). MEGAL and WAG transported all Soviet oil and gas supplies, which were contracted by GDF (France), OMV (Austria), and Ruhrgas (Germany).

Iranian Gas to Europe and new gas pipelines from Western Siberia

During the 1970s, Austria, Germany, and France negotiated the construction of Iranian Gas Trunkline (IGAT-II) in order to connect Europe with the Iranian gas field Kangan. According to the three-party agreement of 1975 between these countries, the USSR, and Iran, Iran would receive Western technologies and would sell gas to the USSR; the latter was supposed to re-sell Iranian gas to Europe. Gas supplies, planned to start in 1980–1982, were to arrive in the terminal of Astara at the Soviet border and then to be transported via Grozny to Uzhgorod—the terminal at the Western Soviet borders—and further to Waidhaus at the West German border.

The Iranian Islamic Revolution of 1979—when pro-Western Shah was dismissed by radical islamists, oil and gas industries were nationalised, and Western energy companies were expelled from the country—made this project irrelevant. At that moment, gas supplies from the USSR

became the only feasible option for Western European countries to replace planned gas supplies from Iran. Moreover, due to the gas price conflicts with Algeria, France also demonstrated interest in concluding additional agreements with the USSR. In this situation, a new pipeline project to connect the Western Siberian gas fields with Europe came to stage. By 1980s, two Soviet domestic gas pipelines had been built: *Siyanie Severa* (Yamburg connected with Uzhgorod at the Czech–Soviet border) and *Soujuz* (Orenburg connected with Uzhgorod at the Czech–Soviet border) with their branches to Germany and Austria.

The negotiations of the Yamal pipeline with Germany, France, Italy, Belgium, Austria, and Netherlands, started in 1978, and several bilateral contracts were signed during 1981–1982. By increasing gas export, the USSR tried to compensate its revenues losses from oil supplies, as an increase in oil production faced a number of difficulties since the end of the 1970s. Initially, the pipeline was supposed to cross the territory of East Germany, but West Germany objected this plan fearing potential supplies interruptions by East Germany in case of a political crisis. Ironically, that time transit through the Soviet Ukraine and Czechoslovakia was considered more reliable.

Despite support by a number of Western European countries, "the resurgence of Cold War in the early 1980s made the Yamal deals highly controversial" (Hogselius, 2013, p. 219). In 1981, the President of the USA Reagan introduced trade sanctions against the USSR, which comprised materials for pipeline construction. The official reason was the situation in Poland. During NATO summit in January 1982, US allies refused to support this strict embargo, and the compromise was offered: European countries could sign previously agreed contracts with the USSR, but they could not provide technologies for pipeline construction. France and West Germany objected these measures.

During NATO summit in June 1982, the USA again tried to persuade France and Germany to stop financing the Yamal project, but faced resistance and accusations of intervention into domestic affairs. In the end, the USA introduced one side embargo on technologies—European companies that cooperated with the USSR could not use US technologies anymore. European

companies continued *de facto* cooperation with the USSR. In October 1982, another compromise was reached: the USA removed sanctions in exchange for stricter control by the European allies for technologies supplies to the USSR, and the European allies had to refuse to sign new contracts with the USSR.

As the USA failed to stop construction of the gas pipeline, it tried to slow it down and to delay an increase of Soviet export revenues. However, the desire of the USSR to complete the pipeline on time at any costs had its own consequences—since "everything was sacrificed for speed…. In many places welding turned out to be of low quality, giving rise to numerous pipeline breaks later on….The first explosion on the Yamal pipeline was reported in October 1983, already before it had been taken into operation along its full lengths" (Hogselius, 2013, p. 197).

Lowering energy demand in Europe from the early 1980s forced the USSR to adjust its gas policy—it started offering lower prices for gas trying to keep the initial volumes. Other suppliers to the European gas market were forced to follow this strategy and to increase volumes at expenses of prices.

During this large-scale increase of Soviet gas import, intentional disruptions of supplies by the USSR were not considered by Western European countries as a potential and serious threat either that time or in the future. Contrary, the governments were more concerned about dumping by the USSR. For example, in 1967 during the negotiations of the agreement, West German government was mainly preoccupied that the USSR "might seek to disturb the Ruhr's politically sensitive coal industry, which at the time was facing severe difficulties, by flooding the Federal Republic with cheap red gas" (Hogselius, 2013, p. 221). However, the USSR "quickly earned a reputation for being extremely tough concerning their demands for a high gas price, and several prospective deals failed precisely because of reluctance from the Soviet side to lower its bids" (*ibid*).

This "transnational system-building" of energy infrastructures (Hogselius, 2013, p. 6) "ran counter to the fundamental logic of the Cold War", constituting "a most remarkable case of East-

West relations and of what has been labeled the "hidden integration of Europe in the Cold War era" (Hogselius, 2013, p. 3). Moreover, as Hogselius (2013, p. 3) notes, "strikingly, several West European countries and regions were connected with the communist pipeline system of Eastern Europe before linking up with the grids of other EC and NATO member states".

4.1.2 The Winds of Change: the Collapse of the USSR and the Energy Charter Process during the 1990s. Attempting Multilateralism within the Neoliberal Agenda

The second period (the late 1980s–early 1990s) encompasses changes in the gas trade due to the major alterations in Europe, such as the dissolution of Comecon, the collapse of the USSR, and the end of the Cold War. Independence of the Soviet republics and political and military independence of the Eastern European countries created certain turbulence in the European gas market, as Russian gas supplies to Western European countries became subject to transit via these new states.

After the dissolutions of the USSR and Comecon, the established practices of interactions between West European energy companies and governments and the USSR faced were challenged. "A period of organisational and institutional chaos" required urgent adjustments of previously stable and predictable relations (Hogselius, 2013, p. 220). The most urgent issue was an arrangement of gas transit via newly independent states of the ex-USSR and Eastern Europe—there was obvious "lack of a stable institutional regime for transporting gas between the former Soviet republics" (Hogselius, 2013, p. 232). In order to meet obligations of supplying gas to contract delivery points, Russia needed to negotiate transit contracts with ex-Soviet and Eastern European states.

During the Cold War, gas was delivered at the Waidhaus and the Baumgarten on the Czech–German and the Austrian–Slovakian borders respectively according to the political division of Europe, and "one delivery point for Soviet gas could serve several EU buyers/end-users" (Konoplyanik, 2009b, pp. 450-451). The transit through the territories of the Eastern European countries of the Soviet block was arranged according to the internal Comecon regulations—the

USSR had operational control over the pipelines through the Comecon territory (Konoplyanik, 2009b, p. 452).

After newly independent states appeared between the Western European countries and Russia, gas transit had to be arranged through their territories—a fragmentation and dissolution of gas infrastructure networks was in place. A new mechanism to ensure transit and access to infrastructure had to be agreed, requiring "a long and painful transition to contractual separation of transit and export supplies governed by separate legislation, and a transformation to market-based pricing for both transit tariff methodologies and the export energy price" (Konoplyanik, 2009b, p. 456).

Despite numerous conflicts between Russia and ex-Soviet republics concerning transit tariffs and gas prices, Russia's supplies to Western European consumers remained uninterrupted until 2006. In turn, Western European countries initially did not look for reducing their dependence on Russia's supplies, contrary, their main concern was how to manage it. The overall understanding of the situation between the parties was that "the problems encountered in the East-West gas trade could and would be solved through sound and mutually beneficial cooperation" (Hogselius, 2013, pp. 211, 220).

New regulations were required in order to secure gas supplies via this new 'transit gap' between Russia and Western European countries. During this period, the gradual divergence of the models began with the launch of the Energy Charter process. In order to provide a comprehensive framework for energy trade, transit, investment protection, and dispute resolution, some European countries and the European Economic Community attempted to establish the multilateral international regime of energy trade and investments in Eurasia. Welcomed enthusiastically in the beginning, the ECT faced difficulties in its ratification by Russia and some other countries, and witnessed its limitations to function effectively, remaining, however, the only legally binding regime in the energy sector. The attempts to resolve problems and to foster a long-term development of all part of the gas value chain—production, transit, and consumption—emerged

into the "idea of brokering east-west energy cooperation via a binding multilateral framework" (Hadfield & Amkhan-Bayno, 2013, p. 2).

In June 1990s, the Dutch Prime Minister Lubbers offered the mechanism of assistance to the former socialist states. The proposed Energy Charter, "the EC Commission's proposal, originally presented in 1990, to construct a 'charter of principles governing long-term energy cooperation between the EC and the Soviet Union" (Hogselius, 2013, p. 211), was transformed into the Energy Charter Treaty (ECT) in 1994, a legally binding international treaty. It was primarily aimed to facilitate access for European investments to domestic energy sectors of former socialist states and to secure transit of energy resources to Europe. The ECT, which entered into force in 1998, was aimed to create a single set of rules for investment protection and transit in the energy (gas) sector.

While the ECT became a multilateral framework, its primarily focus was on the relations between Russia and the EEC (later the EU) and generally highlighted the inconsistencies of attempts to involve Russia into a EU-led liberalisation agenda, shedding light to "Euro-Russian controversies over the gas markets" (Belyi, 2013a). Having not ratified the ECT, which it signed in 1994, Russia applied it on a provisional basis (Art. 45 ECT) until October 2009. The ECT ratification invoked numerous debates in Russia, in particularly in the State Duma, with strong resistance by Gazprom, raising the issue of the Treaty's compatibility with Russia's gas market model (Konoplyanik, 1996, 2001b, 2002). The most serious concerns by Russia regarding its ratification were related to the Draft Transit Protocol and the clarification of transit provisions.

From one side, the ECT remains the only legally binding international agreement in the sectors of energy trade, investment protection, and transit. From the other side, the ECT process was weakened by divergent models of the EU—a liberalised market—and Russia—state-controlled monopoly. Largely, as degree of liberalisation of the EU internal gas market overpassed the ECT provisions in 2003 with the adoption of the Second Gas Directive, the EU gradually shifted its attention from promotion of the ECT to export of its energy *acquis* towards the neighborhoud

(Belyi, 2014b). In this regards, gradual expansion of EU *acquis* through the Energy Community Treaty has been overpassing the ECT initiatives.

4.1.3 Emerging Divergence between Gas Market Liberalisation as a New Doctrine of the European Commission and Resource Nationalism of Russia: the EU–Russia Gas Relations during the 2000s

The third period (the late 1990s—nowadays) is characterised by significant changes in the EU gas market due to EU integration processes and Russia's drawback towards a state-controlled monopoly in the gas sector. This period is marked with growing disarray in relations between Russia and the EU—regarding transit and access to infrastructure, organisation of gas sectors, gas trade arrangements, and dispute settlement.

Regarding EU integration, three major changes took place. First, the EU reforms of its Internal Energy Market during the 2000s changed investment and transit regulations within the EU and introduced a model of the liberalised gas market, completely new for gas markets in the Continental Europe. Second, the issue of gas transit between Russia and the EU–28 became vital after EU enlargements in 2004 and 2007, when most Eastern European transit countries joined the EU. Some of these changes also went in contradictions with the multilateral framework of the ECT. Third, the gas crises between Russia and Ukraine in 2006 and 2009 signaled the failure of transit provisins of the ECT and did not add a positive tone to the relations between the EU and Russia.

Since the 1990s, the relations between Russia and member states—and between Gazprom and European energy companies—were based on the explicitly bilateral basis—the parties concluded LTCs and participated in asset exchange: Russia looked for assets acquisition in the European downstream, while European companies were interested to participate in upstream projects in Russia. However, as already mentioned, a gradual consolidation of the Internal Energy Market, which started with the 1996 and 1998 Directives for Electricity and Gas, and progressed with the 2003 Second Gas Directive, allowed the European Commission to acquire more authorities and to promote its institutional model of the liberalised common gas market (Birchfield & Duffield,

2011). Until the Treaty of Lisbon came into force in 2009, there was also no explicit legal basis for energy policy in EU legislation. During the 1990s, allocating energy issues in three interconnected policy areas, that fell under its legislative competence—environment (sustainable development), the single market (competition), and external relations (security of supply)—the European Commission grasped the leadership in European climate change agenda, started gradual reforms in the European energy market, and tried to step into the external policies domain (Haghighi, 2008).

The European Commission gradually implemented its vision of the gas market developments, steadily applying provisions of EU competition law to the gas sectors in order to create a competitive liberalised gas market with hub-based trade by breaking up the vertically-integrated companies (VICs) (Talus, 2011b). The Commission's ambitious proposal of 2007, opposed by several member states, such as Germany and France, was moderated and finally adopted as the Third Energy Package in 2009 (Eikeland, 2011b).

Despite EU gas market liberalisation has been "a long and winding road" (Stern, 2014c, p. 82), its results required Russia to adapt to changes in contractual structures (Konoplyanik, 2005). The TEP provisions created certain turbulence in EU–Russia gas relations, which had been already uneasy. Primarily it concerned the break-up of VICs and the requirement to sell assets for companies that do not comply with the TEP rules. The assessment of the TEP impact on EU–Russian gas relations and Russia's positions in the EU gas market varies to large extent within the Russian expert community and political circles. As interviews and discussions with experts and policy-makers have showed, Russia interprets the innovations introduced by the TEP as an unfriendly anti-Russian initiative and a mechanism of indirect confiscation and "*de facto* expropriation of the assets". At the same time, many Russian experts agree that the TEP is a serious game-changer in the EU market (and potentially, in the European gas market), and it was a mistake of Russian policy-makers not to take these changes seriously. Indeed, according to a number of interviews, until 2012, few in the Russian political establishment thought that the TEP might have serious implications for Russia and Gazprom.

There are three main aspects of tensions between the EU and Russia, which are discussed in details in the next section.

- The first one is a greater involvement of the Commission in legal aspects of LTCs between EU energy companies and Gazprom, which has been highlighted in the ongoing antitrust investigations by the European Commission in regards to both EU downstream and upstream contracts. This is a result of competence reallocation within the EU and further involvement of the Commission into the regulation of competition in the EU internal gas market. The boundaries of application of EU competition law to the gas sector have been consistently argued to be set up majorly by geopolitical considerations (Talus, 2011a, p. 260).
- The second aspect is ongoing debates about alterations in the gas pricing mechanism. The Commission strongly advocates the replacement of oil-indexed prices by the hub-based mechanism as an appropriate way of gas price definition (ECS, 2007, pp. 164-166). This change is likely to break up the whole logic of relations between a consumer and a producer under LTCs as an investment project.
- The third aspect concerns a number of disputes between EU energy consumers and some suppliers, including Gazprom, about various clauses of LTCs, such as destination clauses and Take-or-Pay clauses, as well as recalculations of payments for TOP infringements.

In order to facilitate relations, the EU and Russia took certain steps to institutionalise their interactions. The Partnership and Cooperation Agreement (PCA), the basis for cooperation between the parties, was signed in 1994 and came into force in 1997. Initially, the PCA was agreed for 10 years and could be renewed every year until the new Agreement was finalised. This has never come into place and the new PCA has been pending for nearly a decade. Energy issues were not clearly included into the PCA, and "there was no reference to it in article 55 of the PCA on legal approximation" (Romanova, 2012, p. 30). To some extent, cooperation in economy and energy was

touched in one of Four Common Spaces, which was worked out during the Saint Petersburg Summit in 2003. The Road Maps for these common spaces were agreed in 2005, and the legal framework was to be specified under the new PCA.

After the PCA's expiration in 2007, the negotiations of the new PCA started, but were postponed by the EU due to several bilateral conflicts between Russia and Member States and the military conflict between Georgia and Russia in August 2008. One of the main objectives of a new PCA remains the legal harmonisation between the parties; therefore, legal provisions on energy issues have also to be included (Konoplyanik, 2009a).

In 2000, the EU–Russia Energy Dialogue was initiated. Subdivided into several Thematic Groups and Subgroups, which consist of representatives of industry and academic organisations from both sides, the Dialogue aimed to enhancing cooperation, to increasing transparency in the relations, as well as to promoting technological exchange. Yet, this is a non-binding framework for coordinative actions and discussion of energy-related issues. Thus, during 2000–2011, most projects dealt with "technological transfer" from the EU to Russia in energy efficiency and renewable energy sources. One of the achievements of the Energy Dialogue has become the Early Warning Mechanism, which was created in 2009 after the Russian–Ukrainian gas dispute in order to prevent further cuts of supplies.

4.2 Domestic Institutional Models and the Cross-Border Gas Value Chain

This section discusses which aspects need to be institutionalised in order to facilitate interactions in the gas market and how domestic institutional models can affect actors' positions regarding structuring these interactions, according to the framework, elaborated in Chapter 2 and presented in Table 4. It also shortly addresses how technological and economic peculiarities of gas extraction, transportation, and distribution affect the way the cross-border gas value chain is organised (ECS, 2007, pp. 33-37).

Several economic and technological factors play important role in this regards. First, gas enjoys lower energy density under atmospheric pressure than oil and coal—"only one thousandth of the energy density of oil", around 35-45 MJ/m^3 "with a lower value depending on the share of inert gases like nitrogen, or a higher value depending on the share of components higher than methane, typically ethane, propane and butane" (ECS, 2007, p. 35). Put under pressure, gas still has 10 times lower energy density than oil.

Second, transportation for long distances is the most important peculiarity of gas markets—unless shipped as LNG, "gas requires a fixed pipeline infrastructure for transportation and distribution. Establishing a physical trading infrastructure for gas is more difficult because of its high specific costs" (ECS, 2007, p. 35). Transportation of gas is its main difference from oil, which is liquid and can be transported both in the tankers and pipelines. Moreover, ties between an exporter and an importer of gas are much stronger—fixed pipelines make it more difficult to break up and require careful assessments of investment decisions. Until recently, technologies of gas liquefaction, shipment and regasification were "much more costly than for handling oil" (ECS, 2007, p. 35), and transportation of gas via pipelines (fixed infrastructure) dominated gas trade. For a long time, gas markets remained primarily regional, with their own particularities in organisation and functioning (BP, 2013).

The particularity of gas markets is also in "import dependence on a small number of exporting countries who are interested in optimising their rent for natural resources and whose production is concentrated in a few super-giant fields", thus making "resource-rent optimisation by gas exporting countries" a crucial aspect of relations (ECS, 2007, p. 34). Given the high costs of transport infrastructure (high fixed costs and low operating costs), pipeline construction of pipelines has conventionally been viewed as an investment project with a need to guarantee investment return: the producer and the consumer have to come to an agreement, divide costs of infrastructure construction and gas fields developments, and to set up a basic framework for interaction during a long period of time (up to thirty years).

The need of long-term relations also brings a certain ‘security’ and ‘interdependency’ component that has triggered attention of IR scholars. Since gas markets are predominantely regional, the security component lies in predictability of relations and supplies between a producer and a consumer; the interdependence component lies in the fact that both are fixed by highly cost infrastructure and would need a lot of financial resources to divert from each other.

Given the overview of essential aspects of gas production, peculiarities of the gas value chain and transportation aspects, as well as developments of trans-border and cross-border transactions, this section discusses the instruments—regulatory practices and institutions—that emerge out to structure interactions in gas markets. The following aspects are crucial for a proper functioning of a gas market:

- *The conditions of the gas trade.* It is necessary to stipulate the mechanisms of gas price formation and adjustment and to make obligations of the seller and the buyer explicit.
- *Regulations of gas transit*. These regulations include definitions of transit, transit tariffs, the conditions of access to gas pipelines, and the mechanism of gas transit dispute settlement.
- *Investment regulation in gas sectors*. These regulations include the investment framework and investment protection provisions, as well as a mechanism of dispute resolution.

According to these crucial aspects, a framework for interactions in international gas markets consists of three major elements:

- *Gas commodity contracts* (the gas pricing mechanism, a duration of contract, and various clauses);
- *Access to pipelines and transit* (regulation of access to infrastructure by third parties and conditions of transit; dispute settlement mechanisms;
- *Investment regulation* (reciprocity as *ad hoc* asset exchange or legal harmonisation).

These practices are an essential way to facilitate transactions—and initially they were formalised in the form of LTCs with states' involvement in the form of intergovernmental agreements—such as gas contracts of the Netherlands and the USSR with their consumers. The organisation of the European gas market was initially based on "contractual arrangements and a variety of informal institutions for enabling communication and cooperation" (Hogselius, 2013, p. 229), and later some formal elements, such as ECT provisions, were added.

Domestic institutions create incentives for choosing a particular strategy in the international arena, and their major indicators have been discussed in Chapter 3. Table 6 summarises the main features of EU and Russia's strategies regarding institutionalised interactions in gas markets, which are discussed in details below.

Table 6. EU and Russia's Strategies Regarding Institutionalised Interactions in Gas Markets

Issues		**EU Strategy**	**Russia's Strategy**
Gas commodity contracts (GCCs)	Norms	Gas-to-gas competition; GCC as a commodity purchase; security of supply	Inter-fuel competition; GCC as an investment contract; security of demand
	Rules	Hub pricing; no destination clauses; no Take-or-Pay clause; short-term duration	Oil indexation; destination clauses; Take-or-Pay clause; long-term duration
Access to infrastructure	Norms	Freedom of transit; separation of production, transmission and distribution	Transit monopoly; export monopoly
	Rules	The obligatory TPA, the REIO clause, unbundling	No TPA, no REIO, vertical integration
Investment regulation	Norms	Legal reciprocity, nondiscriminatory treatment	*Ad hoc* reciprocity, resource nationalism
	Rules	The Third Country Clause, an EU-level dispute settlement mechanism	Asset swaps, a national level dispute settlement mechanism

4.2.1 Gas Commodity Contracts: Changing Modus Operandi

Long-term commodity contracts have been crucial part of the gas trade in the Continental Europe for a long time. Aimed to provide a framework for long-term investment projects suitable both for a producer and a consumer, LTCs comprise several elements which are designed to ensure the whole chain of transactions—the price formula (the gas pricing mechanism), the destination clause, the price review clause, the Take-or-Pay clause, and the duration of a contract (Gas Purchase and Supply Agreement). Evolution of contractual practices is taking place due to developments in markets, but such alterations can become also an issue of contention between government and other authorities. Traditional clauses are being reviewed not only by initiatives of market players, but also their governments.

Take-or-Pay obligation (TOP), or minimum pay obligation, stipulates that the seller is obliged to ship an agreed volume of gas and the buyer is obliged to pay for the minimum agreed volume, even if not used. This clause guarantees to the producer an agreed minimum of revenues from gas sales, and the buyer has "the flexibility to decide whether to offtake all contracted volumes or only a part of them within the range allowed under the contract" (Konoplyanik, 2009b, p. 448). This clause was primarily designed to ensure risk division: the 'resource risk' of gas fields developments for a producer, and the 'market' risk in the downstream activities by a consumer (Konoplyanik, 2009b, p. 448).

Price formula (gas pricing mechanism) and Price Review clause. Gas price under LTCs is defined according to the netback value on the basis of the oil indexation. The netback value means that the price for gas will be calculated "on the basis of the value of competing energies backed to the border of the buyer's country by deducting the costs of transportation and distribution of the buyer" (ECS, 2007, p. 152). This pricing mechanism allows buyers and sellers to have predictable prices and therefore to escape short-term price volatility. The Price Review clause stipulates conditions under which the gas prices in the contract can be adjusted. In case of inability of the

contract parties to agree on such changes, the parties can bring the case to arbitration courts, which are stipulated in LTCs.

Destination clause forbids the buyer reselling gas to other consumers, also to those from other countries. According to the netback pricing mechanism, the delivery point of gas (where ownership rights are transferred) and the reference point for its price (the market of the buyer) can be different. Since transportation costs are deduced from the final price according to the netback principle, prices for different buyers can differ significantly, even if gas is delivered at the same delivery point. For example, Soviet gas was delivered at the Baumgarten in Austria with different prices to different buyers. By this, the destination clause prevents buyers to get profits by reselling gas at different price (the so-called 'price arbitrage').

Duration of contracts. Initially, the contracts were agreed up to for 30 years in order to create long-term stable and predictable relations between a producer and a consumer by matching a duration of the contract to the duration of the investment (Talus, 2011a, p. 265). As infrastructures and gas fields were developed, the length of LTCs has been gradually reduced to 15 years in average. For a long period, LTCs remained "a cornerstone of security of supply in European countries" (Talus, 2011a, p. 277), since they ensured the distribution of risks between producers and consumers "based on a scheme in which the volume risk is assumed by the buyer and the price risk is assumed by the seller" (Talus, 2011a, p. 265). LTCs are simultaneously undergoing revisions and amendments due to developments of gas markets in the mid-term and the transformation of the risk division scheme under LTCs, which is being forged on the basis the Anglo-Saxon liberalised model.

In the last two decades, the significant changes in understanding the organisation of natural gas markets within the EU have led to a shift from "very much a monopolistic and state controlled system to a more competitive and liberalised market" and have challenged "the traditional European energy governance paradigm based on long-term contracts" (Talus, 2011a, p. 264). Nowadays, the institution of LTCs still remains the main form of interactions in the European gas market:

"[a]ltogether more than 250 Bcm/year are imported by EU countries on the Continent under this concept" (ECS, 2007, p. 143). LTCs still prevail in gas supplies from three main gas suppliers—Russia, Algeria and Norway—to the EU. However, along the gradual development of gas markets, hub-based trade is also emerging in the Continental Europe.

The main issue at stake is the reconfiguration of relations between consumers and producers both in regards to upstream (Russia–EU consumers) and downstream (EU wholesalers–end customers) contracts. The distribution of risks is a crucial point in organisation of gas trade—under LTCs risks are divided between producers and consumers, under spot contracts the investment burden is on a producer, while a consumer can face risks of higher prices. Contractual relations under LTCs "suited to the institutional architecture of the gas markets in the EU and the Soviet Union, based as they were on vertically integrated national monopolies that organised the purchase and sale of natural gas" (Rossiaud et al., 2012, p. 17).

Two emerging models have framed the EU and Russia's strategies: Russia defends LTCs, and the Commission promotes hub-based contracts. Upstream LTCs, and their clauses in particular, are viewed by the Commission as obstacles for enhancement of competition, aimed to separate the markets of member states. The main objective is to remove or renegotiate the clauses of LTCs, which according to EU competition law infringe the coherence of the EU internal market. However, these changes might be also unnecessarily drastic and do not properly account for the interests of producers: as Simonia (2004) argues, First and Second Gas Directives of 1998 and 2003 were worked out in the EU without seriously addressing the peculiarities of LTC system in Europe.

The oil indexation of gas price has been a backbone of the gas trade since the 1960s. However, since 2007, there have been ongoing debates about the shifts towards the hub-based pricing mechanism: "it is necessary to distinguish between pricing mechanisms and the underlying forces which determine prices, or, in other words, to distinguish between how prices are determined and what determines prices" (ECs, 2007, p. 41).

The abolishment of the destination clause in the LTCs with Gazprom and several other suppliers, such as Statoil, has become success of the Commission but "hardly to Gazprom's advantage" (Konoplyanik, 2009b, p. 453). The Commission argued that destination clauses contradicted EU competition law since they prevented free flow of gas in the EU and reduces liquidity in the energy markets. Nigerian NLNG was the first to have removed the clause from its LTCs on LNG supplies. In 2002, Gazprom agreed to remove these clauses from all its contracts in the future. Later, Gazprom gradually removed the clause also from the existing contracts—in October 2003 to ENI and in 2004 to OMV. The same did Norwegian Statoil and Norsk Hydro, and Algerian Sonatrach in 2007. The Commission has also renegotiated use restrictions and profit-sharing clauses that allowed a seller to control further gas reselling by a buyer and to get a share of revenues in case gas was sold "outside the agreed area".

At the same time, member states have prolonged LTCs with Gazprom, such as OMV until 2027 and ENI until 2035 (ECS, 2007, p. 158). Despite the fact that the duration of LTCs have been gradually decreasing, the Commission is negotiating for further reductions. According to the 2003 EU Second Gas Directive, contracts were to last up until one year—a period, dangerously short for the gas sector. Even if later this proposal has been renegotiated, the radical reduction of contract duration is the first priority of the Commission.

4.2.2 Regulation of Access to Infrastructure and Transit: Capacity Contracts, the Third Party Access, and the Contractual Mismatch

Access to infrastructure is directly linked to competition rules that exist in domestic institutional models, and includes several issues, such as the conditions of transit, access to infrastructure, and the right to use capacities to fulfill the contract obligations under commodity contracts. Before the 1990s infrastructure, primarily pipelines, were built by contract parties and were used and controlled according to the agreement between them. The transit provisions of the ECT, the only legally binding agreement regarding transit, attempted to regulate ongoing shifts towards

liberalisation of gas sectors in Europe and to ensure non-discriminated access to infrastructure and freedom of transit.

The transit provisions of the Energy Charter Treaty (Art. 7). The Article 7 obliges parties to place "no obstacles in the way of new capacity being established, except as may be otherwise provided in applicable legislation" on the basis of non-discrimination. This Article also provides a definition of a transit areas "both the territory of individual ECT member states and the Regional Economic Integration Organisations (REIOs), securing established transit flows, the non-interruption of transit flows in case of disputes and a special dispute resolution mechanism (conciliatory procedure)" (Konoplyanik, 2009b, p. 468). Since the Article 7.10 of the ECT understands transit as gas flows via states, the EU proposed the Regional Economic Integration Organisation Clause in 2003 to the Draft Transit Protocol to the ECT (Article 20). This clause supposes that the EU is regarded as a whole in consistence with its internal *acquis*, and the transit rules of the ECT (in particularly, Art. 7) should be applied to the whole territory of the EU, but not to the territories of its member states. Accordingly, the EU internal energy *acquis* are argued to prevail over the internationally negotiated treaties. By this, "the REIO clause aims to exempt the European Community from the transit provisions of the ECT because once energy is traded within the EU, it is subject to the Internal Energy Market and hence there is no transit involved" (Belyi, 2014b). In other words, the main argument of Russia against the REIO clause is "a willingness on the part of the EU to exempt itself from the multilateral process" (ibid), while participating "in developing the common rules of the game for the expanding Eurasian energy market, but … [not implementing] these rules within its own enlarged territory" (Konoplyanik, 2009a, pp. 282-283).

Third Party Access (TPA) is a requirement to grant access to infrastructure to any third supplier. It can be obligatory or voluntary. While the ECT does not require the mandatory TPA (a rule often overlooked in Russian policy-making circles as discussions and interviews have confirmed), the EU Third Energy Package defines the TPA as obligatory within the EU territory.

Obligatory access to infrastructure and release of long-term capacity booking create a new problem, the so-called contractual mismatch between commodity and capacity markets. Before liberalisation, VICs had full control over infrastructure (the 'own and operate' principle), and therefore, did not need transit contracts (Konoplyanik, 2009b, p. 460). After the liberalisation within the EU–28, two types of contracts are required—a contract for supplies (a commodity contract) and a contract for transit (a capacity contract), and the contractual mismatch between these two types of contracts might occur in case one of the contracts expires before another, making secure deliveries and fulfillment of obligations difficult.

There are no unified regulations of transit and no mechanisms for ensuring compliance by the transit states. The emerging deadlock on transit provisions derives from a conflict between the ECT provisions, EU *acquis* which require the obligatory TPA, and Russia's positions about a new Draft Convention. Russia terminated its provisionary application of the ECT in October 2009, and proposed to negotiate a new international treaty on the basis of the Draft Convention, presented in 2011. Since Russia signed the ECT during the 1990s, the period of Russia's weakness after the political and economic collapse, she argued for the Treaty revision later, and the Draft Convention has showed "Russia's willingness to revise uncomfortable provisions of the ECT" (Belyi, 2014b, p. 9).

4.2.3 Investment Regulation: Reciprocity and Investment Protection

The major aspects of investment regulation include conditions of reciprocal access to domestic markets (downstream in the EU and upstream in Russia) and investment protection. Investment protection requires a framework, within which the disputes about investment protection are to be settled. They can be settled according to internationally agreed provisions of the ECT and BITs or according to EU internal *acquis*.

Divergence of norms in the EU and Russia—legal reciprocity advocated by the EU and resource nationalism in Russia—leads to increasing conflicts and inhibits investment flows both

ways. Resource nationalism in Russia has underlined that Russian state owned companies (Rosneft and Gazprom) should control upstream projects and has invoked a series of indirect informal expropriations in Russia, limiting significantly investment protection in Russia (Belyi, 2009). Thus, Russia has not ratified the ECT, and applied it on provisional basis until October 2009. Withdrawal from the ECT witnessed further aggravation of resource nationalism in Russia. However, the long-awaited decision of the Hague Arbitration Court on the Yukos case in favour of the Yukos stakeholders has confirmed that international legal frameworks might invoke significant commitments (Riley, 2010).

Moreover, significant changes took place in the EU after the TEP entered into force in 2009. Before EU liberalisation initiatives, the gas sectors of both parties were organised quite similarly—monopolies and vertically-integrated companies controlled the full production chain. However, the EU underwent a gradual development towards a common market—starting from the 1996 First Directive and the 2003 Second Directive, and finalising the 'liberalisation' endeavour with having managed to convince member states to adopt the Third Energy Package in 2009.

The main changes introduced by the TEP about investment protection and access to markets are ownership unbundling and the Third Country Clause (also known as the so-called anti-Gazprom clause). *Unbundling* requires the companies, involved in the gas production and purchase, to sell their transmission and distribution networks. Since the 1990s, the strategy of Russia and its state-controlled company Gazprom has been aimed to the control over infrastructure and to the acquisition of assets in the downstream sector, in order to get an access to European consumers. The main idea was an exchange of assets and reciprocal opening of the markets between Russia and member states (e.g., a highly publicized Gazprom's deal with German company BASF).

However, the initiatives of the Commission during the 1990s clearly demonstrated the direction the EU had chosen: a break up of the vertically-integrated companies and creation of the liberalised gas market with a high level of competition. The Commission's initiatives in 2007 and the TEP in 2009 were seen by Russian officials, as well as many Russian experts, as anti-

Russian/anti-Gazprom in their nature and as a threat to Gazprom's position in the European market (Lavrov, 2013). Then Head of Government Putin underlined that the TEP aimed at decreasing gas price artificially, as well as acquiring access to the infrastructure owned by non-EU actors. The Russian experts in interviews underlined that unbundling principle was presented by the EU as the only viable option and the most effective way to guarantee EU energy security by consolidating efforts of member states in order to resist against Russia's pressures (Romanova 2007).

The so-called *anti-Gazprom clause* prescribes that the owner of infrastructure should meet TEP criteria about unbundling, even if comes from a non-EU state. This clause allows a member state to restrict access of a non-EU monopoly to operation of EU infrastructure. Thus, depending on the model of unbundling, adopted by a member state, Gazprom might be obliged to sell its assets in EU downstream. One of the brightest cases is the case Lithuania *vs*. Gazprom, lost by Gazprom in the Stockholm Arbitration in 2013. Even if Lithuania did not need to comply with the TEP provisions until 2014, it opted to choose its strictest version—the ownership unbundling—having forced Gazprom to sell its shares of *Lietuvos dujos*.

Conclusion

Gas relations between Russia (the USSR) and the EU (Western European countries) have undergone significant transformations since the beginning of first gas supplies to Austria in 1968. Nowadays they are dominated by debates about the use of gas supplies by Russia as a foreign policy tool and about EU diversification policies as a way to guarantee energy security. Such debates were hardly expected when first gas contracts between the USSR and several Western European countries were signed. As Hogselius (2013, p. 217) notices, "Will Europe Come to Depend on Russian Natural Gas?' read a headline in the Oil and Gas Journal's August 28, 1961 issue. It was a radical suggestion at the time, and few analysts—to the extent they took notice of it at all—believed that imports of red gas, let alone any dependence on it, would ever come about".

This chapter has showed that initially Russian (Soviet) gas supplies were not viewed as a potential threat—contrary, the governments of some Western European countries were concerned about the potential dumping effect of Soviet gas, particularly to their domestic coal industry.

Paradoxically, Western European countries opted to put themselves in dependence on their ideological rival during the Cold War: Soviet gas supplies satisfied growing European energy demand during the 1960–1970s and opened a window for cooperation with the Socialist block. Starting in the 1960s, natural gas gradually transformed from a local source in Europe that "did not play more than a negligible role in the energy debate" (Högselius 2013, p. 217) to the fastest growing energy source in absolute terms with a prognosis of around 30 per cent share of total world energy production by 2030 (conventional gas). Import of Soviet gas to Europe grew "from 1.5 bcm per year in the early 1970s to 29 bcm per year at the time of the 'Yamal' pipeline controversy in the early 1980s, to 63 bcm per when the Soviet Union was dissolved in 1991, and 107 bcm in 2004" (Hogselius, 2013, p. 218). What is even more paradoxical is that nowadays, when old ideological divisions are part of history, Russian gas supplies have become an extremely sensitive issue in the EU.

Along developments in domestic gas markets, different issues concerning gas supplies were brought to EU–Russia agenda. During 1950–1980s, gas commodity contracts were long-term (initially around 30 years, later reduced up to 15 years) and oil-indexed; and gas was supplied to the borders. These contracts were concluded between companies ('national champions') and the Ministry of Gas of the USSR (later, Gazprom) and supported with inter-governmental agreements between the USSR (later, Russia) and Western European countries (later, EU member states). After the collapse of the USSR, a problem of energy transit became critical: there was a need to regulate gas supplies through newly independent states in Eastern Europe and in the post-Soviet space. Promoted by the EU and initially enthusiastically supported by Russia, the ECT has failed to become an effective mechanism of securing transit. Despite initial sentiments, the process of the

ECT ratification stalled in the Russian Parliament, and Russia remained reluctant to commit to the provisions, which were inconsistent with its domestic institutional structures.

Since Vladimir Putin won his first Presidential term in 2000, Russia's position towards the organisation of both domestic and European gas markets gradually changed. Domestically, the Yukos case of 2003 symbolised a return to a more state-controlled energy policy. Several Western energy companies were forced to sell their control shares in the upstream projects to Gazprom after their numerous environmental infringements were allegedly reported by Russian agencies. Starting with the second term of President Putin, an increasingly interventionist model of the gas market was chosen. It included legalisation of Gazprom's export monopoly in 2006, *ad hoc* political agreements in upstream projects, and prevalence of domestic legislation over international standards for access to resources and transit (Milov, 2005b).

In the EU, European integration processes brought to the agenda new issues, such as liberalisation of the gas market and amendments of some of LTC clauses. As EU integration progressed, the issues of the EU internal energy market have become a matter of concern also for external actors, and Russia in particular. The model of the liberalised internal market, promoted by the Commission, went in conflict with the practices that existed between Russia and EU member states. Simultaneously, territorial and functional expansion of EU legislation has advocated gradual legal institutionalisation of EU relations with external actors on the basis of EU law. Creation of "a wide-ranging energy community, extending beyond the borders of the Union and based on common rules and practices" (Belyi, 2014b, p. 13) conflicts with bilateralism based on the old schemes of asset exchanges and infrastructure projects, advocated by Russia. Bilateralism was pretty much consistent with business practices between European energy companies and Gazprom, and despite new transit states became "new vulnerabilities in the overall system", Western European countries, "[r]ather than trying to reduce its dependence on Russian gas, however … opted to do what it could to manage it (Högselius, 2013, p. 220). The most famous outcome of this strategy is the construction of Nord Stream, a pipeline to Germany via the offshore part of the Baltic Sea.

The major issue between the EU and Russia remains the level of law to be applied and the degree of formalisation of interactions between them. Thus, approximation of normative–legal bases (Romanova, 2012), clear regulation of trans border pipelines, clarification of transit capacities and participation in international agreements, such as the ECT, have been considered important in Russia (Arbatov, Belova, & Feygin, 2005).

There are mixed messages from both the EU and Russian sides. While arguing for the market liberalisation *laissez-faire* principle, the EU increases regulation internally and externally pursues increasingly strategic goals, such as strategic agreements with countries of the Caspian Region and the creation of the Energy Union. Russia also shows some trends towards liberalisation trends, for example by abolishing LNG export monopoly. Since 2003, there are mixed trends in developments of the domestic institutional models, and it is hard to distinguish analytically Russia and the EU as a geopolitical and market actor respectively.

This chapter has discussed how domestic institutional models of the EU and Russia have determined their strategies regarding institutionalised interactions and set frameworks in gas markets. It has indicated the divergence of norms and rules that structure gas markets in the EU and Russia respectively, and has underlined the power aspects inherited in these models. Both models—of state-controlled monopoly and liberalised competitive market—frame a set of interests that actors try to promote internationally and resist changes in them. Given a high level of disagreements, next chapter seeks to investigate, what conditions of markets (domestic institutional environment) actually lead to the break out of conflict or cooperation and their intensity.

CHAPTER 5. CASE STUDIES

Previous chapters have showed that two different institutional models of the gas market emerged in Europe during the last decade. They have also traced how these evolving models affected the EU and Russia's positions regarding key aspects of interactions in the European gas market and the process of multilateral energy governance. In their developments, the models need to address both domestic institutional dynamics and external factors which affect their internal coherence. As has been demonstrated, both models incorporate mixed combinations of public intervention and liberalisation, and while the EU advocates increasing supranational involvement into organisation and functioning of the Internal Gas Market, Russia reconsiders its model of state controlled natural monopoly towards greater flexibility and liberalisation.

In light of these apparent divergences, both parties have faced a need to deal with their high level of physical interdependence. Trade volumes, despite some decreases, remain significant, and there are no feasible alternatives available to Russian gas supplies for some decades (BP, 2013; Stern et al., 2014) . With increasing negative interdependence, mitigation of occurred differences becomes more intricate and politicised, and the parties are getting involved in alternative high-cost projects. The EU looks for reducing dependence on Russia and finances numerous costly infrastructure projects across the EU Eastern member states. Russia announced the retreat from the European market and gave up the strategy of "going downstream", which was a crucial aspect of Russia's energy policy in Europe. Instead, Russia launches large-scale pipeline construction to China, the projects that will incur high costs under conditions of changing gas markets (Milov,

2014). These diverging policies indicate growing perceptions of unreliability and threaten the assumptions of the strategic partnership, introduced in the PCA.

The three case studies seek to investigate how these differences are mitigated and what aspects of the models contribute to the conflicts between the EU and Russia. They confirm that the structural explanation (competition for resources) creates tensions, and a complex web of interdependencies in the gas trade constrain actors' intentions to engage in open conflict. However, domestic institutional dynamics of gas markets trigger conflicts.

Six indicators are examined on the basis of the presented framework in order to reveal which one was crucial in leading to cooperative solutions or breaking up relations. Existence/acceptance of a dispute settlement mechanism (DSM); the level of liberalisation of markets and state involvement, and existence of an independent regulator; dependence on infrastructure; resilience towards dependencies; durability of contracts, and market fragmentation are assessed through the lenses of domestic institutional environment of the EU and Russia. This chapter shows that domestic models create institutional conditions that might lead to a conflictual–cooperative outcome with institutionalised or institutional conflict.

5.1 Case Study 1: The Gas Advisory Council: Mitigating the Differences

5.1.1 From the Energy Dialogue to the Gas Advisory Council

The launch of the Energy Dialogue in 2000, generally referred to as the Prodi Initiative, in the name of Romano Prodi, then the president of the European Commission, witnessed attempts of the EU and Russia to enhance cooperation in energy without committing to legally binding agreements. To some extent, the Dialogue was designed to complement the stalled ECT process due to divergent positions of the EU and Russia about negotiations on the Transit Protocol. The Dialogue became a broader umbrella framework for discussions in the light of a pending new PCA and vague provisions on energy in the current PCA. It aimed to focus on political consultations with close involvement of energy business communities from both sides

The Dialogue was set up at a sectoral level of DG ENER of the European Commission (and its predecessors respectively) and the Ministry of Energy of Russia, and several thematic groups were established, *inter alia* on strategies, forecasts and scenarios; on the energy markets development; and on energy efficiency (European Commission, 2011). Involvement of business and expert community was expected to become a valuable step towards deeper cooperation in the field and enhancement of trans governmental and transnational institutions, such as Energy Industry Steering Group, which was set up in December 2003 (Romanova, 2014).

Designed as a political dialogue with references to the EU–Russia strategic partnership, the Energy Dialogue had a low level of formalisation. The role of its Secretariat remained predominantly technical—the Energy Technology Centre, inaugurated in November 2005, brought tacit cooperation to a practical level and addressed predominantly substantial issues. During the 2006 Russia–Ukraine gas dispute, the Energy Dialogue witnessed no capabilities to settle the issues, as well as demonstrated the absence of a strategic vision. However, there were some attempts to adapt the thematic groups "for regular exchange of information regarding regulation and policy measures in the EU and Russia" (Romanova, 2014, p. 5). Additionally, after 2006 gas crisis, a red line for crisis communication was established, and after the 2009 gas crisis the Early Warning Mechanism was created. Two gas crises in 2006 and 2009 and the political turmoil during the Russian–Georgian conflict in August 2008 affected to a certain extent the Energy Dialogue as well.

After the introduction of the Third Energy Package (TEP) in 2007 and its enforcement in 2009, some discussions about long-term contracts and TEP provisions took place within the framework of the Energy Dialogue but also mainly within business communities interactions. Before the early 2010s, few experts and officials in Russia would consider seriously the prospects of the TEP, as the author was continuously told during her interviews in Moscow. By 2011, with introduction of the TEP in 2009, differences between the EU and Russia gas sectors became even more evident—and endangered the stability and security of supplies. New measures introduced separation of commodity and capacity contracts within the EU and created the room for the

commodity–capacity mismatch, the mismatch between duration of commodity and capacity contracts. Additionally, it became obvious that no comprehensive framework for energy would be included into the PCA—and a new PCA was unlikely to come into practice in the nearby future (Konoplyanik, 2009a).

Therefore, the Gas Advisory Council (GAC) was an expected outcome to fill the vacuum of EU–Russia gas relations and to address institutional changes in the EU gas market and failures of the ECT process (EU & Russia, 2011). On 24 February 2011, the coordinators of the Energy Dialogue, Minister Shmatko and Commissioner Oettinger signed a memorandum. Since 2011, the issues to be discussed were numerous and were not addressed by any institution, except fragmented political and expert consultations in the Thematic Groups of the Energy Dialogue. The Council was designed as a "mechanism to assess future trends in the gas sector in order to reduce risks and to exploit opportunities in EU–Russia cooperation" (EU & Russia, 2011, p. 1). The first speakers from the EU and Russia's sides became Prof. Jonathan Stern from the Oxford Institute for Energy Studies and Prof. Andrey Konoplyanik from the Gubkin Oil and Gas Institute respectively, two renowned scholars in the field.

5.1.2 Divergence in the EU and Russia's Domestic Institutional Models: the Gas Target Model and the State-Controlled Monopoly

The decision to create the GAC was justified by the need to tackle inevitable adjustments from both sides, invoked by the changes by the TEP which in turn altered the existing practices of the gas trade and infrastructure projects in Europe. A high level of asymmetrical interdependence on each other and low resilience to changes have initially triggered the decision. Gas supply and demand have been acknowledged as essential part of EU–Russia gas relations—around 25 per cent of EU gas demand is supplied by Russia, which constitutes around 70 per cent of Russian gas export (EU & Russia, 2011, p. 1).

This inevitably invoked the issues of resilience to changes—in other words, in the short- and even in the mid-terms, the parties were not able to change the pattern of gas supplies to a significant degree. A boost of LNG supplies and US shale gas production revived ideas of diversification and even substitution of the Russian supplies, but overall it was acknowledged that there would not be enough gas available in international gas markets to fulfil this goal. Interdependence between the parties—EU limited options to replace Russian gas supplies in the short-term and even mid-term future and the need of stable budget revenues, given the socio-economic institutional structure of Russia—facilitated acceptance of a need to mitigate the differences in the gas models, even on *ad hoc* basis.

Both parties have opted for diversification of their infrastructure—the EU aims to build LNG terminals and side routes to connect with the Caspian Region and potentially, Iran, especially now, when the process of stabilisation of relations with Iran has been launched (Reuters, 2014b). Russia, in turn, has announced a grand project of pipeline construction to China under the largely publicised gas contract with CNPC. However, LNG deliveries cannot replace Russian supplies, and while in the mid-term new supplies should be available from Australia, the USA and Qatar, LNG diversification requires construction of expensive LNG terminals in Europe, the process that takes certain time.

Despite this infrastructure diversification is in place, the changes are of at least mid-term focus. Diversification will be problematic for both parties given constraints and institutional developments both in the EU (a lack of steering capacities internally to implement projects) and in Russia (decisions to build LNG and facilitate competitiveness remain unclear). Moreover, the gas industry is a network industry, dependent on infrastructure and investments, and issues of changes in the EU and Russia need to be addressed in order to reduce uncertainties, especially those of a potential mismatch of commodity and capacity contracts after liberalisation of the EU gas market.

The GAC was viewed as a logical step towards discussion of issues at the moment the parties were approaching a deadlock. It was designed as a purely consultative body; however, it

provided a valuable floor for debates and discussion also about the ongoing implementation and elaboration of EU Network Codes for the gas market.

Durability of both long-term commodity and capacity contracts are increasingly challenged in the EU (Talus, 2011a), while hub-based trade as a guiding principle of the organisation of the European gas market is not accepted by Russia. Market liberalisation is an ongoing process in the EU and slow transformations are also in place in Russia; at the same time, there is increasing state involvement into market in the EU and Russia. Similarities in market fragmentation have played a crucial role as well: despite numerous changes in contractual structures, invoked by regulatory transformations within the EU, LTCs still remain the crucial and significant part of relations with external suppliers. Despite commercial players exploit opportunities to renegotiate them for more favourable conditions, they remain the major form to frame interactions.

On 24 February 2011, the coordinators of EU–Russia Energy Dialogue agreed to create the GAC: "a mechanism to assess future trends in the gas sector in order to reduce risks and to exploit opportunities in EU Russia cooperation" (EU & Russia, 2011), tasked to provide conclusions and recommendations. The GAC was designed to meet regularly, four times a year, and until 2014 eight meetings took place (European Commission, 2014d; IEF, 2014). The following issues have become the primary focus of the meetings: finding a common position regarding prognosis of gas demand; changes in the EU gas market; and infrastructure issues. The short summary of topics discussed is presented in Table 7.

The first meeting of the GAC (GAC, 2011) established a draft format of recommendations and suggestions to address both short- and long-term developments in order to build relations on "on trust, confidence, and reliability". The major task was designed to assess developments in global market and "to discuss and evaluate ongoing issues of concern for EU–Russia gas relations, notably concerning the organisation and structure of the EU and Russian gas markets" (GAC, 2011, p. 1). The major issues have become "mutual understanding of tolerable uncertainties" about gas

markets and elaboration of recommendations on EU–Russia Roadmap for Energy Cooperation 2050.

The second meeting (GAC, 2012d) took place in January 2012 in Vienna. A number of issues were addressed, including global developments in gas markets with presentations by IEA experts, and by Sergey Komlev, a head of the pricing department of Gazpromexport. One of the main issues was adaptation of methodologies of scenarios for Roadmap 2050 in order to respect sovereignty and provide "tolerable level of uncertainty". Regarding the EU gas market, consultations with national regulators about implementation of TEP provisions were suggested. During this meeting, a decision to launch a third workstream on infrastructure was taken.

The third meeting (GAC, 2012a) majorly focused on the 'transition period' until the new legal/regulatory structure of the EU internal gas market becomes fully operational. The Workstream 1 proposed clarification of 'tolerable level of uncertainty' in order to secure investments to Russia and security of supplies to Europe. Regarding the EU gas market, the Russian side proposal included the two-segment approach for gas markets: it was proposed to incorporate gas hub pricing and exit/entry points deliveries, while preserving deliveries at borders and the oil indexation, and introduce the open season for capacities. In the Workstream on infrastructure the pan-European dispatching center was proposed.

The fourth meeting (GAC, 2012b) underlined a lack of agreement between the EU and Russia regarding a common methodology of prognosis, as well as lack of agreement of the common dispatching center. Tackling the changes in the EU gas market issues was identified as a priority.

The fifth meeting (GAC, 2012c) focused on discussions on the results of the first year of the GAC activity (GAC, 2012e).

Table 7. The EU–Russia Gas Advisory Council: Summary of Discussions

Meeting	Workstream 1. Energy Cooperation Roadmap (ECRM)	Workstream 2. EU Internal Gas Market	Workstream 3. Infrastructure
First	Finding "mutual understanding of tolerable uncertainties" about gas markets and elaboration of recommendations on EU–Russia Roadmap for Energy Cooperation 2050	To discuss changes in organisation of the gas market in the EU	To discuss implications of EU–Russia gas relations for cross-border infrastructure developments
Second	Global gas developments discussed - Adaptation of methodologies of scenarios. - The Roadmap is to respect sovereignty, but provide 'tolerable level of uncertainty'	Consultations with NRAs about TEP implementation	Intention to start workstream on infrastructure
Third	A clearer methodology of prognosis required, the Roadmap 2050	Open season; the two-segment approach is offered by Russia	Proposal of the Pan-European gas dispatch center Proposals to focus on infrastructure projects and infrastructure provisions in cross-border projects; Security of infrastructure
Fourth	No agreement on methodology and assumptions between the parties; Discussions should not concentrate on scenarios; until 2030 decarbonisation will not play significant role in EU–Russia gas relations; proposed regular annual publications on gas market developments	Further discussion of Network Codes and risks of the transition period towards the harmonised European framework. Proposals for a new market of capacities—Open Season—by Russia; Work on the Russian market can be postponed, since the changes in the EU internal market are prioritised.	No agreement on a central dispatching center—but ENTSOG platform can be used as the first step; Criteria for defining PCIs between EU–Russia is an important issue; Russia should inform more about future plans on infrastructure.
Fifth	Future parameters of EU imports from Russia and interaction of projections and EU–Russia cooperation	Transportation capacity are discussed. Despite pricing is a sensitive issue, it cannot be left outside the GAC.	Issues of insufficient cross-border capacities shall be address; Russia's proposal—a need of different types of ownership of EU infrastructures. The issue of OPAL tackled as a subject for special discussions

Meeting	Workstream 1. Energy Cooperation Roadmap (ECRM)	Workstream 2. EU Internal Gas Market	Workstream 3. Infrastructure
			between Russia and the Commission
Sixth	The IEA report, EU decarbonisation policies are not of immediate effect on Russian supplies. Competitiveness of Russian gas has been affected in the short term by cheap coal and shale gas	The Russian gas market should also be discussed. Pointed that EU internal market issues are seen as discriminatory for Russia. A non-binding Guidance Paper on transition from point-to-point to entry/exit systems is proposed. Regular updates between the parties on the Network Codes are agreed	Rules for new infrastructure projects and elaboration of criteria for common projects are required and welcomed.
Seventh	Need to enhance transparency in the methodology, various scenarios of Russian gas supplies were presented by experts from both sides. Long-term contracts remain valuable, but their role will diminish, need to address the interplay between competitive pricing and resource rents considerations	Further work on the Network Codes, delivery points can be preserved under the TEP, differences in EU national laws. Capacity contracts by TSOs provide no guarantees for capacities available	Dispatching center—can it be a minimum level of cooperation among TSOs? Is South Stream a project of common interests?
Eighth	Further technical exchange on methodology is useful, disagreements about gas pricing addressed	Further elaboration	Further elaboration

The conclusions of the sixth meeting (GAC, 2013a, p. 8) underlined that continuation of work will depend "on the ability of both sides to make progress towards clarification and resolution of problems".

The seventh meeting (GAC, 2013b) discussed methodology of scenarios, pointing that they are not so much of prognosis but of support to decision-making. Further work about practical implementation of regulatory changes and discussion with Russia experts was welcomed.

The eighth meeting (GAC, 2013c) planned a new round in April 2014 but it was postponed given tensions on Ukraine. The issues to be addressed were the most important in EU–Russia gas relations—demand scenarios and a pricing mechanism, LTCs, the capacity-commodity mismatch, delivery points, unbundling issues, and the common dispatching center.

5.1.3 Implications and Prospects for Further Institutionalisation: From a Strategic to Practical Level

There was an understanding that adjustment is inevitable since the EU and Russia depend on one another, but at the same time both parties do not see this dependence as a long-term strategic partnership, as interviews in Brussels and Moscow confirmed. The GAC has become an institution aimed more at mitigating *ad hoc* differences than elaborating a common framework.

This explains acceptance of only consultative bodies which tackle the issues of the regulatory and technical nature. Differences discussed in the previous section explain the limited degree of formalisation. There are no legally binding framework, but only vague consultative framework of the Energy Dialogue, which is more for political and expert debates. Yet, the technical level of the Network Codes and Framework Guidelines has been assessed as the most appropriate to tackle the issues of radical divergence of the models. The discussion of currently elaborated Network Codes, which are of more technical, regulatory nature, have allowed launching debates and discussions regarding the practical implementation of the TEP. Both parties and their participants (NRAs, market players, and expert community) admitted the need to settle the issues.

The number of arbitration decisions accepted by the parties has remained high. Some decisions ruled out further move to hub based trade in the liberalised market and several decisions have resulted in obligatory selling of assets. However, both parties and their energy companies have looked for decisions of these courts as *ultimo ratio* in their arguments.

Bilateral relations between member states and Russia have been increasingly framed within a broader EU–Russia framework and the EU supranational level has become more relevant in EU–

Russia gas relations. A need to accept and negotiate the EU-level model has been accepted—not officially, but implicitly—in the cases of South Stream and OPAL.

Despite high interdependency, incorporation of all differences in one legal binding draft is impossible given sharp divergence of the models. Discussions of infrastructure issues, suggestions to create a common dispatching center and to discuss pan-European infrastructure projects are all signs of an open dialogue that potentially increase transparency, facilitate investment decisions, and reduce uncertainties for market players.

5.2 Case Study 2: Looking for 'Fair' Gas Pricing and Renegotiations of LTC Provisions

5.2.1 Changing Domestic Institutions: Growing Inconsistencies in the Gas Trade Issues

With progress in EU integration and gradual shifts to gas hub trade (ICIS, 2014a), the contractual relationship between the producer and the consumer that was previously "in perfect harmony with the institutional architecture of the gas markets" of the USSR and Western European countries (Boussena & Locatelli, 2013, p. 182) has become increasingly inconsistent. As elaborated in Chapter 4, LTCs were the cornerstone of a gradual deepening of interactions between energy companies of the EU and Russia and guaranteed stability and predictability of interaction in the capital-intensive gas industry. The compatibility of the models, which were based on national champions and vertically-integrated monopolies, provided a solid basis for stable gas trade relations.

The institutional changes, introduced in the EU during the 2000s (in 2003 and 2009), resulted "in creation of new organisational models (unbundled model) and new rules, regulatory standards and operating principles for network industries" (Boussena & Locatelli, 2010, p. 182). LTCs became subject to these changes since they contradicted the vision of the EU internal gas market advocated by the Commission. Certain clauses of LTCs turned out to be inconsistent with the EU regulatory framework, and the nature of long-term contracts as an investment project was challenged by the EU institutional model.

Organisationally, the elaboration of the EU Gas Target Model, aimed to create hub-based trade questioned the oil-indexed gas pricing mechanism of LTCs. The relevance of the oil indexation has been continuously on top of the debates and has been facilitated by economic changes in gas markets when spot prices in the US market went twice as down compared to the European market in 2009–2012. A gradual introduction of spot components in contracts has been accepted by commercial players—for example, ENI and Gazprom recently switched to some spot pricing (Chazan, 2014)—but is complicated by administrative practices of the Commission to remove completely the oil indexation.

Regarding competition developments in the EU gas market, free movement of gas, and understanding production, transmission, and distribution as separate businesses have become the cornerstone of the EU approach. Therefore, destination clauses—territorial restrictions for gas reselling—were announced to contradict EU competition law in the early 2000s after the adoption of the Second Gas Directive. Take-Or-Pay clauses—an obligation to supply and to pay for certain volumes of gas—were also announced as incompatible to the liberalisation process. TOP clauses have been argued to limit competition and to lead to market fragmentation (Boussena & Locatelli, 2013, p. 185). Duration of contracts, which initially served as a guarantee that investment return is safe, are argued to be in contraction to the model of liquid hubs attempted by the EU. The radical shortening of the contract duration up to one year, initially introduced by the Second Gas Directive contradicted all existed market structures and practices, where LTCs were an essential element. Therefore, after negotiations with Russia, harsh position of the Commission were softened, as interviews with experts in Brussels and Moscow reveal.

Some clauses were renegotiated during 2002–2003 in contracts with a number of EU consumers and Gazprom on the basis of an agreement between Russia and the Commission. Simultaneously, the Commission launched similar negotiations with Algeria and Nigeria—other large gas suppliers to Europe. The highest point of the tension has become the launch of the anti-trust investigation by the Commission against Gazprom (Konoplyanik, 2013): Gazprom was

claimed to infringe competition, preserve *de facto* destination clauses, and put unfair pricing in Central and Eastern Europe.

Changing structure of gas market and adaptation of LTCs to certain extent results from evolutionary developments of gas markets. However, the process in the European market has also become a matter of administrative pressures for transformations that are not completely adapted to the existing situation in the market. Creation of competitive market and replacement of LTCs structures is an undergoing top-down approach.

5.2.2 Adaptation of LTCs Provisions: Consultations and Arbitration Decisions

The issues under discussion have being negotiated in three levels—consultations (also within the GAC), international arbitration decisions used as a justification of the positions, and legal disputes in order to address inconsistencies in practices. These cases are being analysed only from the position of regulatory changes—the way LTCs and/or spot contracts are defined and institutionalised in interactions by the parties. While market changes adjust cooperative structures between commercial players, introduction of a new framework or preservation of the old one create turbulence, and not only force market players to seek clarifications, but also create tensions between the parties—the EU and Russia.

In this regards, high state-control in Russia and administrative changes in the EU can be attributed to higher state involvement that lead to increasing conflicts. In Russia, LTCs represent the cornerstone of the Russian energy strategy and are nested into the broader institutional structure of the gas sector. They guarantee certain revenues and stability for the institutional framework in the country. In the EU, the situation is more complex, given that the model is designed to create a completely independent market—yet, the whole process of market creation is a kind of 'state intervention' into practices, an attempt to create an independent market by proactive redesign of th regulatory framework. This close involvement of administrative bodies from both sides makes the outcome more conflictual.

However, it is crucial to underline that resilience towards dependencies from the EU side has gradually increased—available large volumes of cheaper gas in international gas markets make the EU positions stronger. Many experts agree that the gas market has transformed from the market of one seller to the market of one buyer. In other words, market transformations provide a 'window of opportunities' for the EU to promote further competition in gas markets and to receive high concessions from external suppliers. In turn, changes in gas markets and institutional transformations lead to lower durability of contracts—LTCs are no longer the only legitimate and accepted way to manage gas trade in Continental Europe. This is reflected in the position of the Commission which has consistently argued for their amendments and even abolishment.

All these factors lead to conflicts. However, high dependence on infrastructure and acceptance of the existing way to settle the issues keep the conflict within the institutionalised framework—numerous consultations and debates within expert communities (also within the GAC) are being viewed as a way to find out an appropriate compromise. It is evident that both parties take extreme positions, but a need to elaborate a decision is crucial—the crucial factor that keep the conflict within the institutionalised framework of dispute settlement.

Destination clauses—territorial restrictions of gas resale—were abolished in the EU in 2003–2004 as a result of the trilateral package agreements between Gazprom, the Commission and energy companies—ENI, E.ON, Rurhgas, OMV—and the losses by Gazprom were agreed to be recompensed in the future.

Regarding TOPs, the Commission continuously announced that they contradicted the nature of competition in EU liberalised gas market elaborated in the GTM. Since adaptation or cancellation of TOP is subject to bilateral adjustment between the contract parties (energy companies), the involvement of the Commission and the Russian Government was indirect—companies launched a number of arbitration procedures in order to reassess the conditions of LTCs. Otherwise, the abolishment of TOP provisions might repeat the trilateral negotiations between the

Commission, Russia, and energy companies as it happened in 2003–2004 regarding the destination clauses.

These misunderstandings have predominantly been negotiated within informal consultations on implementation of the TEP since January 2010, and later, since November 2011, within the framework of the Workstream 2 of the Gas Advisory Council. This conflict has also become a matter of power considerations—inconsistencies in domestic institutional structures between the EU and Russia make crucial what model will be set up in their interactions. If EU *acquis* prevail over contractual law and intergovernmental agreements, Russia will have to adapt to EU-led regulation and adjust its domestic institutions to the EU framework. Given informal constraints and economic interests, this is unlikely to happen, at least in a conflict-free manner.

The gas pricing mechanism has become arguably the most contentious issue in EU–Russia gas relations. The petroleum products indexation has been used in LTCs since the very beginning and still dominates LTCs in Europe, constituting 2/3 of total gas trade volumes. The proponents would argue the oil indexation to be a hedging instrument, while the opponents would argue that gas-to-gas competition allows more flexibility. The positions of the EU and Russia during these informal consultations and further work within the GAC have been characterised as an attempt to find a compromise "between Komlev and Stern" (Konoplyanik, 2005, p. 43), the two radically opposite positions. Prof. Jonathan Stern, the speaker from the EU side for the GAC consistently argues for immediate spot switching, and Sergey Komlev, the head of gas pricing department of Gazpromexport, defends the virtues of the oil indexation.

The antitrust investigation has become one of the most debates issues and have led to a domino effect in EU–Russia gas relations as argued by Konoplyanik (2014d). In September 2012, the Commission issued a press release that announced a launch of the antitrust investigation against Gazprom in order to disclose anti-competitive practices—a methods widely used by the Commission vis-à-vis its own energy companies (Eikeland, 2011b; Talus, 2011a).

Despite the Commission tried to distance this investigation from political considerations, Russia's reaction was rather fast. Decree 1285 "On measures for protection of interests of the Russian Federation in the course of foreign economic activity, conducted by Russian legal entities" to protect strategic companies was prepared in a couple of days, claiming that this investigation is a kind of 'trade war' started by the Commission. Overall, the claim was that the Commission tried to replace the burden of support of Eastern member states to Russia, arguing for revision of prices, which are, as argued, in total accordance with contractual law. This Decree has become a clear political response, given in a moment when the anti-trust case, while being allegedly politically-motivated, still was exclusively legally grounded.

The Decree stipulated that Russian company, defined as a strategic one, has to obtain a prior consent of the federal executive bodies before it provides information, make amendments in agreements and dispose its assets or right to carry activity regarding requests of foreign authorities. The Russia's Ministry of Energy was defined as a controlling federal agency for Gazprom in this regards. These actions have obviously put a case into a clear political area, "thus transferring the conflict from a 'force of arguments' into 'arguments of force' debate" (Konoplyanik, 2013, p. 9).

Debating the framework of the EU model is inevitable for both parties but the debates should take place within the required framework of international law, not politicised discourse. Yet, Russia drifted towards self-exclusion from multilateral process of the ECT and acceptance of its dispute settlement mechanism, prioritising domestic provisions. The EU, in turn, has prioritised the EU legal system over international law provisions, claiming the prevalence of *acquis* over international contractual law.

Given changes in the EU gas market, which has become a market of excessive supplies since 2008, Gazprom has been trying to settle the case by putting forward some concessions. It has, however, resisted a regulatory pressure to change its pricing practices in Eastern Europe, which remains a concern for the EU regulators. This investigation was postponed by the Commission in light of the crisis in Ukraine (Reuters, 2014a), but renewed in the early 2015.

5.2.3 Spreading the Conflict beyond the Institutional Framework: the Anti-Trust Investigation and Politicisation of the Debates

The issues of the gas pricing mechanisms and the role of LTCs in EU internal energy market have been discussed within the GAC framework and during informal consultations between EU and Russian experts, and international arbitration decisions have been used as precedents for future similar cases. Since early 2012 both parties have opted to move forward political claims, and tensions might escalate beyond the framework of negotiations. This shift is accompanied with an intensive break up of dependence on infrastructure by the EU and Russia.

It was witnessed that both parties have demonstrated moderate acceptance of multilateral institutions—Russia withdrew from the ECT, and the EU has been pushing prevalence of EU rules over contractual law and intergovernmental agreements. In order to mitigate this high level of interdependence, which is likely to decrease in mid-term but which is crucial to be mitigated now, technical and/or political consultations within EU–Russia gas relations (at least on destination clauses) have been launched.

A moderate level of legal disputes between the parties (acceptance by Gazprom to settle the issue and to commit) might expand towards politicisation of the issues—depending on results of the investigation, Russia can retaliate and take Gazprom out of the EU legal space. Partial acceptance of decisions of arbitration courts led to the fact that both parties have accepted decisions regarding pricing mechanisms and TOP clauses.

Potentials for spreading conflict out of the institutional framework are high. Even if the anti-trust investigation has been postponed, it can easily be taken out of the institutionalised area, since Russia has already adopted the Decree in order to protect Gazprom from huge fines. This postponement, not clearly explained by DG COMP, might lie in the political sphere as well—given a high level of tensions regarding Ukrainian transit and approaching winter, further escalations of

the investigation might be viewed as undesired at the moment. The issues of anti-trust investigation and the gas pricing mechanisms are considered to be the most crucial in debates about the contractual framework for the EU and pan-European gas markets.

Implications for energy security are following. Stable rules and practices are essential in gas business, since the industry requires a lot of investments and long pay-back periods. Despite the timeframe of gas investment projects has been gradually decreasing due to economic and technological developments, gas business still remains extremely capital-intensive. Therefore, whilst adaptation to changes is taking place and EU market players increasingly support EU provisions regarding renegotiations of contracts, radical changes can hinder market integration and cause serious implications for security of supplies. Both the EU and Russia continue to defend their opposite and rather radical positions—a complete switch to spot pricing *vs.* preservation of the oil indexation respectively—consistently increasing the gap between their models and triggering further politicisation of issues.

5.3 Case Study 3: The REIO Clause and the Transit Protocol to the Energy Charter Treaty

5.3.1 The Energy Charter Process: Attempting New Rules of the Game

The Energy Charter process, initiated by the Dutch Presidency at the European Economic Community (EEC) in 1990, attempted to involve newly independent and post-transformation states of the post-Cold War in the multilateral framework for energy trade, transit and investment protection. In June 1990s, the Dutch Prime Minister Lubbers offered a mechanism of assistance to the former socialist states. The proposed Energy Charter, "the EC Commission's proposal, originally presented in 1990, to construct a 'charter of principles governing long-term energy cooperation between the EC and the Soviet Union" (Hogselius, 2013, p. 211), was transformed into

the Energy Charter Treaty (ECT)[26] in 1994, a legally binding international treaty. It was primarily aimed to facilitate access for European investments to domestic energy sectors of former socialist states and to secure transit of energy resources to Europe. The ECT, entered into force in 1998, was aimed to create a single set of rules for investment protection and transit in the energy (gas) sector.

Gradual inclusion of post-Soviet countries into the sphere of liberal capitalism as a logical outcome of 'the end of history' were part of positive aspirations for cooperation and the mood of those days. The ECT immediately outgrew politically-inspired conclusions and was transformed into a legally binding treaty, signed in 1994 by 52 countries. Russia signed the Treaty but did not participate actively in the early 1990s.

While the ECT became a multilateral framework, its primarily focus was on the relations between Russia and the EEC (later the EU) and generally highlighted the inconsistencies of attempts to involve Russia into a EU-led liberalised agenda, shedding light to "Euro-Russian controversies over the gas markets" (Belyi, 2013a). Having not ratified the ECT, which it signed in 1994, Russia applied it on a provisional basis (Art. 45 ECT) until October 2009.

The major disagreements were concerned with the REIO clause and the dispute settlement mechanism for transit—mediation mechanisms that prescribe that transit interruption should be prohibited in case a dispute occurs. A mediator is entitled to set up temporary conditions for volumes and tariffs for a 90-days period. This provision has become one of the key disagreements between the EU and Russia.

5.3.2 Between a Rock and a Hard Place: the ECT Transit Provisions and EU–Russia Gas Relations

ECT provisions were designed to create a common arena for all actors and promote non-discriminative access to capacities and transit. However, it witnessed to be hard for both parties to accept them without exceptions. EU integration developments resulted in claiming that the EU

[26] Energy Charter Treaty is a legal framework for investment protection, regulation of transit issues, and access to domestic markets. Signed in December 1994 and entered into force in April 1998. To date, there are fifty-two members, ten observers to the Energy Charter Conference, and sixteen observers to the Energy Charter Conference by Invitation. Ten international organisations (e.g., IEA, OECD, WTO) have the Observer Status.

territory is excluded from transit provisions, despite the fact that member states were signatories of the agreement. Russia was predominantly concerned about access to pipelines and transit monopoly, trying to preserve Gazprom's leading role, as the result of the domestic institutional environment of complex irregular and shadow arrangements and wider perceptions of Gazprom as 'national treasure' (*natsionalnoe dostoyanie*) (Konoplyanik, 2001a). The major concern of Gazprom related to the transit of Central Asian gas via its transmission system—transit that was argued to create losses in Gazprom's revenues and to oblige Gazprom to provide access to its pipelines. These provisions would also challenge an opaque regime of access to infrastructure and tariff setting in Russia—absence of an independent regulator allowed certain manipulations by Gazprom, as discussed in Chapter 3.

However, according to the ECT, it does not require the obligatory TPA, but in case the TPA is granted to a third party, this access should be non-discriminatory. Moreover, according to further elaborated scenarios in the Transit Protocol, transit can be granted only in case of available free capacities. Additionally, oil transit through Russia reached high volumes but no issues of profit losses due to domestic tariffs were raised by oil companies (Konoplyanik, 2001a). Transit—an issue of reciprocity and cooperation—was not viewed by the Russian Government and Gazprom as a problem that required an international legal mechanism, despite Russian supplies cross several states and a stable framework might facilitate transit.

5.3.3 Domestic Institutions, EU–Russia Gas Relations and Difficulties in the ECT Process

Inability to reach an agreement between the EU and Russia can be explained by their divergent domestic dynamics—the EU gradually moves towards the EU internal energy market, which has more profound and far-reaching liberalisation models than the ECT provisions. The Russian model, reinforced by drawbacks to state control since the 2000s, also brings concerns about relevance of the ECT.

In other words, the ECT for Russia represents a legally binding transit provisions to ensure stable supplies according to the Russia's domestic model of vertically-integrated companies, whilst in the EU the ECT played the role of a facilitator of competition in the energy sector. Instead, Russian domestic institutional model treats competitive unbundling (separation of production and transmission) as a measure that potentially hinders security of supplies, creating the capacity-commodity mismatch.

To certain extent, since the mid-2000s, the Energy Community Treaty (EnCT) has become a priority for the EU, representing a mechanism of rule promotion on the basis of EU *acquis*. Russia's proposal (the Draft Convention) to create a new institution might symbolie a complete non-acceptance of the ECT. Certain doubts persist whether the ECT modernisation process, launched after Russia's withdrawal, will be successful in the absence of support of two leading players. Doubts increase in the light of the fact that the ECT is aimed to involve Japan and China, countries with institutional models, rather different from the one promoted by the ECT.

Removing the EU and Russia from an active role in the process can have serious implications for the whole Treaty—it is not viewed as relevant and accepted by both parties, for them, it is either 'too little' or 'too much'. The Draft Convention, proposed by Russia is also about promoting the Russia's regulatory framework: the Draft reinforces state sovereignty over resources and enforces links between demand and supply. This proves, as argues Romanova (2014, p. 8), that "Russia' rejection of the legally binding ECT is caused not by its legal nature but rather by the paradigm of regulation it promotes".

Even if not concerned directly with transit issues, issues of investment provisions have clearly indicated that the conflict has expanded the institutional environment, witnessing a low acceptance of arbitration decisions. Termination of provisional application by Russia was also rumored to be connected with the Yukos case and the desire not to pay remedies for its stakeholders. The decision of The Hague Arbitration Court in the peak of the Ukrainian Crisis in

2014 raises new problems of implementation of this decision since Russia announced to have no intentions to pay remedies.

Transit issues are being settled exclusively via the European Commission–member-states–Russia framework with politicised trilateral talks between the EU, Russia and Ukraine during 2014. Institutional arrangements are absent and have been substituted with politically guided agreements. This has serious implications for transit security—the absence of common and agreed norms and rules creates tensions and might break transit flows. Moreover, differences in approaches have created extremely politicised environment.

Conclusion

The findings of this chapter suggest that conflicts might emerge out of differences in domestic institutions and affect international arrangements, invoking politicisation and security concerns. The way the EU and Russia choose to address conflicting issues depends to a large extent on a combination of several indicators—existence of a DSM, dependence on infrastructure, degree of market liberalisation and state involvement, resilience towards dependencies, market fragmentation, and durability of contracts.

The case of the creation of the Gas Advisory Council reveals an important aspect of EU–Russia interdependence—unilateral domestic changes in the institutional framework of the EU has required *post hoc* alleviations by the EU and Russia regarding changed conditions of the EU–Russia gas trade and Russia's infrastructure ownership in the EU territory. Low resilience towards interdependence— an absence or a low presence of alternative sources and suppliers available to replace Russia as a supplier and Europe as a consumer has also facilitated the understanding of the need to discuss regulatory and policy-based uncertainties in their relations. The Gas Advisory Council was created on the basis of the existing framework of the Energy Dialogue, but remained limited to consultative functions and *ad hoc* adaptations. Non-binding nature of the GAC is to large

extent explained by differences in actors' models—the degree of market liberalisation and state involvement between them inevitably limited the intentions of actors to elaborate a more detailed and more binding framework for interactions.

The case of ongoing negotiations of LTCs provisions between the Commission and Russia is an example of a transposition of market relations into the sphere of political decisions. Commission's initiatives in redefining upstream LTC clauses, facilitated by economic changes in gas markets, symbolise greater exclusion of market forces from formulation of policies and a greater attempt to redefine the single gas market with the toolkit of EU competition policy. Dependence on LTCs, which remain the significant part of EU gas trade, and availability of dispute settlement mechanisms have prevented the conflict from a break out.

The case of the negotiations of the Transit Protocol for the ECT has, on the contrary, showed how non-acceptance of the dispute settlement mechanism and a break up of dependence have led to an institutional conflict, invoking greater deterioration of multilateral arrangements in Europe. To some extent, increasing EU and Russia's disenchantment in the ECT has invoked the ECT to shift its focus from Eurasia towards a broader worldwide framework.

CONCLUSION. TOWARDS A REGULATORY FRAMEWORK FOR THE EUROPEAN GAS MARKET

EU–Russia relations have been always complex and intricate but at the moment of this thesis' completion (Autumn 2014) they are moving towards nearly complete disarray. The crisis in Ukraine rapidly escalated from peaceful protests against President Yanukovich's refusal to sign the Association Agreement with the EU in late November 2013 to the large-scale military operation against rebel groups in Donetsk and Luhansk Regions in the Eastern part of Ukraine (Decree of President of Ukraine, 2014; Eremenko, 2014; Spokesperson, 2014). Symbolically, ten years ago, Moshes (2004) asked whether Ukraine after President Kuchma would divide Europe as once did the Cold War, and nowadays, it is apparent that Europe has faced a new large scale humanitarian crisis, similar to the Bosnian and Kosovar ones (Bennet, 2014; Nikolaidis, 2014; Pizzi, 2014).

The situation became even more sensitive after the crash of the Boeing of the Malaysian Airlines on 17 July 2014 over the territory brought under control of the rebels, leaving 298 dead. This catastrophe invoked reciprocal accusations between the USA and the EU and Russia: the plane was suspected to be shot down by the rebels with a missile that was allegedly either delivered from Russia or stolen from the Ukrainian military forces (Gordon, 2014). Russia retaliated by accusing the Ukrainian Air Forces of being responsible for this catastrophe, pointing that the real aim might have been the plane of the President of Russia (Lenta.Ru, 2014). The investigation is yet to be taken by the International Civil Aviation Organisation, and some preliminary findings by the Dutch Safety Board are already available (BBC, 2014b), but the level of tensions is remains unprecedented.

This catastrophe has already triggered the third wave of EU and US sanctions against Russia. Contrary to previous travel bans and asset freezes on selected Russian high-ranking officials, these sanction affected *inter alia* technological cooperation in the energy sector with several Russian energy companies, including privately-owned Lukoil, and introduced restrictive financial measures for several Russian state-owned banks (Council of the EU, 2014; US Department of State, 2014; US Department of the Treasury, 2014). To retaliate, Russia restricted import of a large range of agricultural products from *inter alia* the EU, Japan, Norway, and the USA (President of Russia, 2014).

Despite Russia's optimistic announcement that these sanctions provided an opportunity for modernisation of the economy (Portansky, 2014), EU and US restrictive measures seriously affected Russia's economy and financial system (Interfax, 2014c, 2014f)—to the extent that already in November 2014, the Ministry of Foreign Affairs of Russia called for a reciprocal lift of sanctions (Novaya Gazeta, 2014). As Russian ruble exchange rates to US dollar and euro are skyrocketing and economic stagnation is evident, the Russian Government increasingly voices concerns about these sanctions as attempts to change the political regime in the country (Interfax, 2014b).

A ban on technological cooperation, which is essential for Russia's LNG and Arctic projects, investment outflows, and a lack of financial resources have already challenged upstream and infrastructure projects of Gazprom and Rosneft (Belyi, 2014a; Konoplyanik, 2014b; Vedomosti, 2014). For example, Vladivostok LNG project is being rumored to be dismissed, officially because Gazprom prioritises pipeline gas export to China, as agreed in May 2014 (Henderson, 2014a; ICIS, 2014b); yet no official confirmation from Gazprom has been received (Miller, 2014a). Sanctions have revealed unsustainability of Gazprom's and Rosneft's investment programmes and made apparent a lack of resources for their large-scale pipeline projects, such as Power of Siberia (*Sila Sibiri*) and South Stream. The latter was abandoned in early December 2014, and Russian government plans to build an alternative pipeline to Turkey under the Black Sea—the decision that raises more questions (from financial to strategic ones) than provides answers

(Richert, 2014).[27] Increasing political involvement in gas markets signifies greater state intervention into strategic sectors (Belyi, 2014a). The question remains to what extent commercial players in the oil and gas industry are ready to tolerate such intervention and which 'backdoors' for cooperation under sanctions they may choose.[28]

It is quite difficult to foresee how the situation will develop even in the nearest future (Baier, 2014; Dreyer & Popescu, 2014; Gol'tz, 2014). The crisis around Ukraine might become part of a fundamental conflict between Russia and Europe (Morozov, 2014). The normative order Russia intends to promote was doctrinised in the idea of *Russkij Mir* (the Russian World), articulated by President Putin in his Crimean speech on 18 March 2014 (Efremenko, 2014; Lukyanov, 2014; Zevelov, 2014). Appraised by some Russia-based scholars (Bordachev, 2014; Karaganov, 2014), these shifts in Russia's foreign policy thinking requires more detailed assessments. Legitimation of Crimea's annexation *à la* Great Power Politics of the XIXth century might increase Russia's isolation from the international community and trigger various unforeseen political and economic problems for the country in the future (Inozemtsev, 2014a, 2014b, 2014c; Telin, 2014).

The negative spillover of these tensions has also affected energy governance in Europe. Divergences between the EU and Russia regarding the organisation of the European gas market was reinforced from both sides. An urgent creation of the EU Energy Union was justified by the need to reduce EU dependency on Russian gas (European Commission, 2015b). Russia demonstratively shifted its energy strategy towards the Asian gas markets and speeded up the gas contract between Gazprom and CNPC in May 2014 (Natural Gas Europe, 2014a). However, this gas contract with China, which was declared to be a path-breaking opening of a new gas market for Russia by Russian officials (Platts, 2014a) and Gazprom representatives (Miller, 2014b), is questioned to provide strategic and economic advantages to Russia (Milov, 2014). Arguably, the strategy to

[27] It is worthy to note that Russia and Turkey signed just a Memorandum of Understanding, and negotiations on the pipeline project are yet to start (Platts, 2014b). Serious disagreements about the gas price are rumoured to complicate negotiations.

[28] Sanctions are likely to boost non-transparent deals between governments and companies under sanctions, foreign energy companies, and traders—as happened during the periods when Iran and the South Africa were under sanctions. For details, see Ammann (2010).

enhance energy cooperation with Asia as a geopolitical instrument to balance Europe , might facilitate Russia's isolation from governance arrangements in the European gas market and increase bullish rhetoric towards Europe (Topalov, 2014).

It is also worthy to note that institutional conflict has also spread to investment protection: the recent arbitration decision of the Hague Court on 18 July 2014 ruled out $50 bn of remedies—the biggest sum in the history of international investment law—to the Yukos stakeholders, recognising the bankruptcy of the Yukos by the Russian state as intentional (Worstall, 2014). Russia's "a retaliatory, even panic-stricken" termination of provisional application of the ECT in October 2009 was allegedly connected with no desire to pay remedies in case the arbitration decision would be in favour of the Yukos (Hadfield & Amkhan-Bayno, 2013, p. 7; Riley, 2010). It has been widely considered a short-sighted "Russia's legally ineffective but politically damaging decision" (Hadfield & Amkhan-Bayno, 2013, p. 7), since Russia's withdrawal from ECT provisional application is not retroactive and Russia remains bounded to the ECT investment and dispute settlement provisions over the next 20 years (Konoplyanik, 2012a, pp. 40-44). Russia's retaliation to pay the remedies (BBC, 2014c; Economist, 2014a) may also signal further attempts to review international legally binding agreements signed by Russia (ITAR-TASS, 2014; Korchemkin, 2014).

The Role of Domestic Institutional Models in International Institutionalisation: Theoretical Implications and Contribution

After greater public intervention in energy markets became apparent in the early 2000s, scholars and policy analysts have focused on addressing two major issues of institutionalisation and energy conflicts. First, scholars have been interested in what factors explain difficulties in international institutionalisation and consistent weakening of multilateral frameworks. Second, they have debated

whether interests of energy producers and energy consumers are indeed incompatible, and, thus, no common vision about organisation of energy markets can be achieved.

Addressing these debates, Chapter 1 outlined the scholarship about the role of energy resources in states' policies and about governance arrangements in gas markets. The first part of the chapter provided an account of the approaches which prioritise the importance of either structural factors of unequal allocation of energy resource or deviations from free markets in explaining intricacies of international energy cooperation. Resource and normative determinism, inherited in these approaches, has been argued to be insufficient in addressing problems experienced in bilateral and multilateral energy interactions. The second part of the first chapter has been devoted to analysis of domestic factors, which have been advocated to play the crucial role in the process of international energy institutionalisation. It has been showed that domestic models—institutional choices of states that incorporate various considerations regarding competition, state control, access regime to markets, and a broader vision about gas market organisation—affect states' policy considerations about multilateral governance arrangements. In broader terms, these models offer various combinations on the continuum between state capitalism and free markets about how gas market governance should be addressed.

The analytical focus on domestic institutional models provides a more comprehensive overview of the exact regulatory choice a state opts to choose and avoids normative oversimplifications that energy importing countries adhere to free markets and energy exporting countries preserve greater state intervention. A focus on domestic institutions has offered a more nuanced explanation of state energy interests. As has been argued, interests of energy producers and consumers differ to a certain extent, but this difference does not become the major and the only factor that inhibit institutionalisation.

Contrary, as has been showed, these are different "regulative paradigms" (Romanova, 2014, p. 8) that make cooperation intrinsically difficult. The study has argued that differences in domestic institutional models of the gas market might facilitate negative interdependence, politicise

predominantly economic issues, and further inhibit cooperation and institutionalisation of energy relations. Domestic institutions may affect states' choices about international frameworks of energy governance. Thus, being locked into domestic institutional choices, states may demonstrate a high level of non-acceptance of existing frameworks or experience difficulties in finding a mutually acceptable agreement.

Indeed, findings show that interests between consumers and producers contrast in a number of issues, but also reveal that misunderstanding between them is a result of institutional factors of the gas market rather than of inevitable divergence of interests on the basis of energy resources. This is especially apparent in negotiations on Draft of the Transit Protocol to the ECT. Thus, concerns about preservation of transit monopoly due to Gazprom's objections became a cornerstone of Russia's position and nearly completely disregarded benefits that might have been received as a result of the ratification of the ECT (Konoplyanik, 2012a). Another revealing example is Russia's persistent adherence to the oil indexation in LTCs (Komlev, 2013), which by no means represents the only beneficial option for energy producers *per se,* but which can be a crucial element of producers' stability under certain domestic institutional conditions (Konoplyanik, 2013; Stern & Rogers, 2013). The launch of gas trading at Russian Mercantile Exchange SPIMEX in October 2014 also shows that domestic institutional changes might play the role in how states perceive market and regulatory changes.

Bridging domestic and international factors, the study has also advocated a complex analysis of actors' political and economic interests in energy relations. The study has claimed that the gas sector, which is subject to a detailed regulation due to costly investments into infrastructure and which requires a predictable framework of interactions in order to facilitate long-term investment decisions, inherently encompasses interrelated political and economic interests.

The study has also initiated debates about power aspects in international energy governance, bringing new insights to the seminal division between 'liberal' and 'realist' energy actors. This thesis has advocated the argument that the conceptualisation of power as a direct (physical) control

over energy resources by resource-rich states is too narrow to dominate the analysis of power in the energy domain. In response, the study has offered a more inclusive and comprehensive framework that allows to examine alternative ways power can be expressed and capacities of resource-rich states constrained. The most important contribution of this study is an analytical differentiation of resources and power: this study has showed that while resources can be a foreign policy tool in certain cases, the sharp dichotomy of the producer–consumer relationship reflects just one type of power, compulsory one.

States and other actors might be also affected in direct and indirect ways through institutional settings—imposition one or another model as a benchmark for a common institutionalised framework is also a matter of power relations. Escaping determinism and providing a detailed account of domestic conditions, the study has sought to overcome normative traps of taking the side of one or another model, and to show that each empirical model has its own peculiarities that might not fit into the model frameworks of state capitalism and free markets. This argument is very timely for empirical testing, since the 'right' and 'appropriate' model for regional and potentially global gas market(s) is debated worldwide. A detailed inquiry is needed about how particular combinations of rules and practices distribute benefits and alter actors' positions.

Empirically, the case of EU–Russia relations has confirmed that a rule design can have a more far-reaching effect on capabilities of actors than it has been usually assumed in the IR energy literature. Commitments to EU rules by EU member states and contracting parties of the EU Energy Community have a long-term effect on modalities of gas practices, and alter capacities of producers and importers in favour of traders at gas hubs. At the same time, Russia has experienced difficulties in exploiting institutional power to its advance—the decision to limit its participation in the multilateral Energy Charter process and *posteriori* reactions to the EU Third Energy Package signify a lock-in into self-fulfilling perceptions as *Energy Power*.

Another crucial issue addressed in this study is institutional aspects of energy security. Shared rules and norms to regulate cross border gas flows is an essential element of the overall

stability of the gas market, investment inflows into upstream projects, and secure transit. In general, a well-designed governance mechanism, and predictable rules and norms, are in interests of all market participants. Divergences in domestic institutional models lead to negative interdependency and redefinition of governance arrangements. Thus, international institutions are not shared and accepted by all participants, and escalation of disagreements may result in politicisation of gas issues.

The case studies have examined which factors facilitate tensions and create misunderstandings between highly interdependent actors. Depending on a complex interplay of presence and acceptance of dispute settlement mechanisms, the level of market liberalisation and state involvement, presence or absence of an independent regulator, level of dependence on infrastructure, resilience towards dependencies, durability of contracts, and differences in market fragmentation, cooperative or conflictual outcomes can emerge. A detailed account of domestic models allows providing a more comprehensive analysis of EU–Russia gas relations, shedding light on shortcomings of the sharp dichotomy between producers and consumers, limitations of the neoliberal *laissez-faire* argument, and the normativity of the argument that free markets are the right model for energy markets. Genesis of domestic institutional choices has not been addressed in the proposed analytical framework, but its further detailed analysis is welcomed in future research.

Methodologically, a clear differentiation of gas issues from other energy-related topics have offered an original angle to look at the *problematique* without focusing either on single relations between Russia and member states or single formal institutionalised frameworks, such as the Energy Dialogue and the ECT process. Moreover, the offered framework allows encompassing all existing initiatives, both formal (the Energy Dialogue, the ECT, and the EnCT) and informal (gas contracts, investment reciprocity, and concepts of energy security), and offers a comprehensive overview of gas issues. By scrutinising the relations between the EU and Russia, the study has also contributed to a more comprehensive overview of gas issues in IR, bringing a detailed analysis of

gas market organisation and existing institutional models, and providing a framework for further analysis of various gas relations.

One Market, Two Models: Empirical and Policy Implications

EU–Russia gas relations illustrate how domestic factors might affect actors' strategies regarding governance arrangements: commitments to rules and practices and acceptance of shared norms depend on actors' domestic institutional choices. The case of EU–Russia gas relations during the 2000s reveals how mistrust between Russia and the EU about regulatory aspects of cross border gas flows has affected negotiations of the Transit Protocol to the ECT, politicised gas trade issues, and disenchanted cooperation within the Energy Dialogue. The perplexity is enhanced with the fact that cooperation under Cold War ideological and security disagreements transformed into highly politicised and securitised weakening of bilateral and multilateral energy governance in Europe. Even a need to update transit and investment provisions in the immediate aftermath of the Cold War and looming energy demand during the 2000s (until the economic transformations of gas markets since 2008) did not facilitate cooperative solutions.

The detailed analysis of the EU's and Russia's domestic institutional choices in Chapters 3 and 4 shows that differences in these models have contributed significantly to the deterioration of the EU–Russia gas agenda. Increasing dissimilarity between the EU Gas Target Model and Russia's state-controlled natural monopoly has invoked deinstitutionalisation and politicization of the agendas. Analytical importance of domestic institutional choices and limitations of resource and normative determinism have been also proved empirically. Thus, both models incorporate various regulatory tools on the range between state control and open markets.

The EU's choice for the liberalised market model has been incrementally alleviated by competition policies and various regulatory specifications, but also witnessed a greater public intervention of supranational institutions into gas markets of member states. A greater supranational

involvement through infrastructure projects development in line with the Ten-Year Network Development Plans (TYNDPs) and the Projects of Common Interest (PCIs) and through elaboration of Network Codes, technical and regulatory rules for the gas market, increasingly aligns member states' gas wholesale markets to operate according to the EU rules. The case of capacity allocation in OPAL,[29] a German interconnector between Nord Stream and the Czech Republic, is a revealing indicator of further Commission's involvement in gas markets, despite certain objections by member states (TASS, 2014).

A choice for controlled partial liberalisation of the domestic gas market has highlighted some institutional shifts in Russia as well. Natural monopoly of Gazprom for pipeline gas transit and for pipeline gas export is progressively challenged by various domestic stakeholders (Interfax, 2014e; Serov, 2014b). First-ever gas trading in Saint Petersburg, launched in October 2014 at St. Petersburg International Mercantile Exchange (SPIMEX), also shows intentions to create a more competitive market for gas, providing an alternative to the oil indexation of Russia's long-term commodity contracts.

Increasingly competitive practices invoked by transformations in international gas markets (Konoplyanik, 2014a, 2014c) require adaptations by both the EU's and Russia's models. Economic changes in gas markets, discussed in Chapter 3, have facilitated acceptance of the EU liberalisation agenda by domestic stakeholders, such as energy companies and transmission system operators. The Russia's model is also affected by these apparent changes. Gazprom's LNG export monopoly was abolished in January 2014 in order to enhance competition, and pipeline export monopoly was rumored to be under serious revision in late 2014. Additionally, Rosneft's legal suits against Gazprom to obtain the third party access to Gazprom's pipelines appeal to best practices of gas markets liberalisation and challenge the institutional model of Gazprom's monopoly (Interfax, 2014d; Papchenkova & Serov, 2014).

[29] According to the Commission's position, up to 50 per cent of the OPAL gas pipeline's capacities should be reserved for alternative suppliers. Gazprom requested the European Commission to provide an exemption to the OPAL—since no other supplier is ready to ship through the pipeline at this moment. Despite Germany supported Gazprom, the European Commission consistently postponed the decision.

The study has also addressed the question of how an institutional model might become part of power relations about the organisation of the European gas market and becomes part of power relations between participants. Governance arrangements proposed by the EU and Russia are the most vivid part of these alterations. Expansion of the EU internal regulatory mechanisms to wider Europe is a driving force for market transformations. A gradual inclusion of the South-East Europe and Ukraine in the sphere of EU norm-making under the Energy Community Treaty is arguably a step towards an EU-designed European gas market. In this regards, termination of provisional application of the ECT by Russia in October 2009 underlined the significant shift in Russian political thinking—the only legally binding multilateral framework for energy trade, transit, and investment was announced to be harmful to Russian interests in the hydrocarbon sector and biased in its proper design.

Self-exclusion from institutional developments of the European gas market—aggravated with foreign policy shifts and increasing tensions with European counterparts—might have serious consequences for Russia's ability to frame the rules of the game in the European (and potentially, global) gas market. Russia might be trapped in another extreme—dismissing governance arrangements for investment protection, transit and access to infrastructure, and the gas trade as unimportant. Challenging existing multilateral frameworks, Russia risks facing *ex post* an unfavourable position of a rule-taker, not a rule-maker in the European gas market. Moreover, the decision on the Yukos case has once again demonstrated that avoidance of multilateral framework can be damaging.

The end of South Stream in December 2014—rather unexpected despite all difficulties faced by the project recently—is a timely opportunity to highlight the importance of institutional aspects of energy security, aspects that have been rather overlooked in ongoing debates about EU and Russia's diversification strategies. These tensions around South Stream have reflected shifts in conventional business practices of pipeline project financing and confirmed broader changes in energy governance in Europe. First, a failure to agree on a framework acceptable for a consumer, a

transit state and a producer mostly due to different understanding of rules to structure gas transit governance in Europe has triggered supplier and transit avoidance policies by the EU and Russia respectively. As a result of deep divergence among rules and practices, avoidance of the supplier (Russia) and the transit state (Ukraine) has become a quintessence of EU and Russia's energy policies respectively which, in turn, required costly and commercially challenged infrastructure projects.

Indeed, there are enough capacities to deliver Russian gas to Europe and the rationale for the construction of South Stream was rather to bypass Ukraine after a series of profound disagreements about *inter alia* the gas price and payment issues. This inability of the EU and Russia to frame a reliable framework for transit and secure deliveries has triggered costly spending on new gas infrastructures also in the EU, especially in Central and Eastern European member states. Justified by a need to enhance market interconnections within the EU for the purpose of completion of the EU internal gas market, these new infrastructure projects are also designed to increase resilience against gas interruptions through Ukraine and reduce EU overall dependence on gas supplies from Russia. Argued to ensure interconnection with the Western part of the EU in case of gas supplies disruptions via Ukraine, these interconnectors are rather economically questioned given low gas demand in Central and Eastern Europe.

Arrangements that allow a predictable and stable framework of interactions in gas markets are crucial for creating 'right' incentives for market players and enhancing stability of cross-border flows. Moreover, creating a common level playing field in energy markets, predictable rules of the game decrease politicisation and help avoiding costly projects, often little justified commercially. These observations shed light on the second point— the failure of South Stream is a revealing case of a fragmentation of the conventional framework for pipeline construction in Europe. Coupled with economic transformations in gas markets worldwide, this fragmentation is also a result of the emergence of the EU model that reframes gas trade business practices and alters financing mechanisms of pipeline projects.

The European Commission's persistent requests for the revision of intergovernmental agreements between Russia and member states also indicated emerging competition over law that shall be applied for such cross-border pipeline projects, raising debates whether EU law has prevalence over those intergovernmental agreements that were signed before EU law made applicable to the territory of some member states and/or certain provisions of EU law came into force. Discussions whether the TPA exemption would have been granted to South Stream in case the project promoters had requested it, are rather intricate, but the rejection even to apply for the TPA exemption is a clear indicator of Russia's definite refusal to comply with the Third Package provisions and accept EU *acquis* as a benchmark for energy governance in Europe. The case of South Stream symbolises a shift towards new modalities of gas interactions in Europe and further attempts to expand applicability of the EU model towards non-EU upstream. This conflict between the EU and Russia over the status of South Stream is also a struggle for setting the benchmark for further debates about regulatory governance of the Wider European gas market.

As already pointed, feasibility of the agreement between Russia and Turkey about the construction of a pipeline, alternative to South Stream, remains unclear. It is also still unclear how a framework for non-EU infrastructure projects will evolve and whether other players, such as Turkey and Azerbaijan will accept EU-led changes. However, a gradual increase in a gap between the EU and Turkey's models of the gas market might be observed already now, providing new challenges for energy security in the region. Implementation of EU *acquis* under the Energy Community Treaty by Ukraine (Chyong, 2014), despite being rather chaotic with little progress until now, will also inevitably question existing transit governance and compatibility of upstream contracts with the EU Third Energy Package provisions and might trigger further confrontation between the EU and Russia.

Incompatibility between various visions about how gas markets should be organised and non-acceptance, especially by key players, of the ongoing EU-driven changes in modalities of interactions in the European gas market might facilitate further politicisation of relations, threaten

cooperative arrangements and create a zone of turbulence in Europe. Falling oil prices in the end of 2014 might have a positive effect on the level of politicisation of these debates—a shortening gap between oil and gas prices might facilitate ongoing transformations towards greater gas-to-gas competition in a more market-based fashion (Riley, 2014a) or to silence the urgency of shifts towards hub pricing.

In the second part of 2014, confrontational patterns seem to prevail fueled by ongoing crisis around Ukraine with reciprocal accusations and sanctions, and existing governance structures are likely to be further weakened (Riley, 2014b). There is certain danger that a drift towards pipeline politics and unilateral imposition of rules will lead to another deadlock (Interfax, 2014a).

Institutional Organisation of Gas Markets: Future Research

The thesis has advocated the argument that domestic institutional factors may play an important role in various processes of international institutionalisation. Accordingly, by bridging domestic and international levels, the institutionalist approach allows avoiding IR structural and normative deterministic assumptions that have guided the research about energy conflicts and international institutionalisation so far. The study contributes to broader debates about the prospects of energy governance worldwide addressing the role of domestic institutions in formulating states' policies about acceptance of multilateral and bilateral initiatives.

First, the study has opened the way for other comparative studies on how domestic institutional models of other important actors affect their strategies regarding bilateral and multilateral energy governance initiatives. Cases in the immediate proximity include Azerbaijan and Turkey, a prospective supplier and a transit hub to the EU respectively. Acceptance of the EU model by these countries and their participation in the EU Energy Community process represent a crucial test for the prospective framework of the European gas market. The ongoing construction of the Trans-Anatolia Pipeline (TANAP) by Azerbaijan and Turkey and negotiations between Russia and Turkey on Turkish Stream to replace failed South Stream invoke a number of questions about

how these modalities will co-exist with the EU gas market model. Another interesting case might be Ukraine, which recently boosted implementation of the EU Energy Community Treaty. Shifts from the state-controlled gas sector to market liberalisation and unbundling coincide with legacies of the preceding model of interactions between Russia, Ukraine and the EU and are likely to trigger further conflictual patterns in the European gas market.

Analysis of domestic institutional models of Australia, China, and Japan might be a revealing case for the assessment of transformations in the Asian gas market. A complex interplay of actors' strategies and institutional backgrounds will shed light on the emerging structures of the Asian gas market and other regional gas markets. Additionally, if the trend towards globalisation of gas markets persists in the future, it might open 'a window of opportunities' for one of the models to become a benchmark internationally and domestically.

The offered framework might also benefit research about the Energy Charter modernisation process. Future studies are encouraged to investigate to what extent enhancement of the ECT process depends on the ECT compatibility with domestic institutions of key actors, which are approached to revive the process, such as China, Japan, Turkey, Turkmenistan, and the USA.

Second, further analysis is needed into genesis of domestic institutional models, in order to reveal factors that facilitate their transformations and evolution. Some research in this field has already been undertaken, but predominantly on the energy policy formation. Analysis of domestic institutions would allow showing how domestic institutional changes can bring certain inconsistencies in relations between states and overcoming a deterministic antagonism between energy producers and consumers that has been favoured in IR so far.

The study welcomes research about the EU internal dynamics of the Internal Energy Market completion, interrelationships between various stakeholders, member states, and external actors. An examination of how EU integration processes altered EU acceptance of the ECT, a multilateral treaty, is an important issue to examine the prospects of multilateral energy governance, especially in light of Italy's withdrawal from the ECT in the early 2015 (Amkan Bayno, 2015). A cross-case

comparison of producers' models, such as those of Australia, Norway, Russia, Qatar, and the USA, will contribute to 'opening the black box' of producers' interests regarding energy governance.

The 2014 Ukrainian Crisis represents a crucial test for EU–Russia relations and EU international actorness. It has already invoked further enhancement of EU integration in energy—it is yet unclear how the Energy Union relates to the model of the liberalised gas market, but it surely represents a serious step towards 'speaking with a single voice' in energy and further securitisation of EU energy policies. These shifts require a reassessment of the norms vs. interests debates about EU energy actorness, bringing an analysis from regulatory studies of how the EU gas market model might be developing (Ascari, 2013; Glachant, 2013). This will allow bridging debates about the EU as a market actor and a security-driven path of EU external energy policies. A more critical assessment of perceived or real threats in EU energy security is also welcome in light of ongoing large-scale spending on infrastructure projects within the EU—the issues that have been transforming into a self-fulfilling prophecy in the energy strand of securitisation studies.

Third, 'bringing power back to' energy governance will enrich debates about shifting power relations due to regulatory and market changes. This will move the discussion beyond the analysis of various international institutions and governance initiatives as cost-effective arrangements to tackle global energy issues towards examination of power aspects of energy governance. In the immediate proximity, it might be interesting to investigate alterations in power brought by the changes in the gas pricing mechanism in the European gas market—shifts of pricing power from energy companies to hub traders. There is also a need of a more theoretical and methodological use of the Energy Power concept to differentiate between actor's (self-)perceptions of being an energy power or being threatened by an energy power and the actual outcome of energy power. Debates about power aspects in energy can be also expanded beyond the (neo)realist framework of power as an outcome of physical possession of energy resources and routes for their transportation.

Thus, debates about energy power can be enriched with looking at the ability of setting rules and legitimising the sense of appropriateness in energy, and especially in gas markets. This research

path can be enhanced with the analysis of paradigms' shifts in governance of international gas markets, including debates about an appropriate gas pricing mechanism. Bringing institutional and productive power (Barnett & Duvall, 2005) back into analysis will allow expanding the framework for analysis of EU–Russia relations, as well as EU energy actorness both in Europe and across the world.

Fourth, a discussion of EU and Russia's institutional changes in hydrocarbon sectors would also shed additional light on the issues of energy security. Given a low formalisation of EU–Russia gas relations and an informal nature of gas trade international institutions, energy security also depends on common rules of the game. Triggered by domestic shifts in institutional structures of hydrocarbon sectors, these rules are increasingly reassessed in negotiations between the European Commission and Russia. A focus on institutional aspects of energy security advocated in this thesis represents interesting grounds for an examination of the role of rules and norms in providing energy security.

APPENDICES

Appendix 1. Framework Interview Questions

1. How do you evaluate the current state of EU–Russia gas relations?
2. How do you assess multilateral and bilateral energy initiatives in Europe?
3. How do assess economic changes in gas markets since 2008? Do they affect EU–Russia relations? What are their consequences?
4. How do you evaluate the formal frameworks between the EU and Russia (the ECT, the PCA, and the Energy Dialogue)?
5. Are there any differences in the models of the gas market in the EU and Russia?
6. Should the gas pricing be changed?
7. What was the main obstacle for ECT ratification?
8. What are the main aspects of investment regulation, how should they be institutionalised?

Additional FIQs for Russian officials and experts:

1. What cooperation framework does Russia try to promote? Does Russia want a comprehensive framework for cooperation, a legally binding agreement, a new PCAwith the EU?
2. How do you see Commission's initiatives of the creation of the liberalised market?
3. Are there changes in the concepts of export monopoly and natural gas monopoly in Russia?
4. Is there any change in the nexus between competition and regulation in the gas sector in Russia? Why does the third party access (TPA) not work in Russia?
5. In your opinion, why did the project of South Stream advanced before obtaining the TPA exemption according to EU law?
6. What are gains and losses for Russia for accepting the EU model?

Additional FIQs for EU officials and experts:

1. What is the cooperation framework the EU seeks to promote? Does the EU want a comprehensive framework for cooperation, a legally binding agreement, a new PCA with Russia?
2. Are there changes in the concept of gas market liberalisation in the EU?
3. What is the role of public intervention in the EU Internal Energy Market?
4. What is the interplay between competition and regulation in gas markets of the EU?
5. Would South Stream have been granted the TPA exemption in case the project promoters had applied for?

Appendix 2. Glossary

destination clause. Territorial sales restriction in gas commodity contracts that prohibits the buyer to re-sell gas to other customers in the same or another country; if the buyer re-sells gas, the profit must be shared with the seller (profit-sharing).

downstream. A sub-sector that deals with activities in consumption, such as refinery or distribution. "[T]he dividing line to upstream is usually the point of the first commercial transaction in the chain" (ECS, 2007, p. 229).

energy transition. A move from the predominant use of one type of energy resource to another. Conventionally, there are three stages of the energy transition: the first—from wood to coal—took place during the Industrial Revolution of the XIX century; the second—from coal to oil and gas—started in the middle of the XX century; the third—from fossil fuels to renewable sources of energy—is taking place now.

gas pricing mechanism. Mechanism of how gas price is set up in a gas commodity contract. Several options exist (IGU, 2014). For a historical overview of the evolution of gas pricing, see Konoplyanik (2010, 2012b).

Gas Target Model. an EU wholesale market model based on hub trade. In 2015, the GTM was updated to assess new challenges to the gas sector. The model is intended to encourage wholesale market liquidity by making hub trading easier and more transparent, and will ultimately constitute a mature and attractive mechanism as an alternative to traditional long-term bilateral contracts (ACER, 2014b, p. 164).

In order to make the GTM functioning, several Network Codes and Framework Guidelines should be elaborated: Congestion Management Procedures, Network Codes on Capacity Allocation Mechanism, Gas Balancing, Interoperability, and Tariffs. For a detailed analysis of CAM and Congestion Management Procedures and an overview of the GTM, see Yafimava (2013).

hub. "Interconnection of several gas pipelines, eventually in combination with nearby storage facilities" (ECS, 2007, p. 231). Henry Hub (Erath, Louisiana, USA) is the main hub in North America and a reference point for gas pricing in North America; National Balancing Point (NBP) is a virtual trading location for gas futures contracts in the UK; Japanese Crude Cocktail (JCC) is "the average price of customs-cleared crude oil imports into Japan", mostly used for pricing LNG shipped to Asia. For an overview of European hubs, see: ICIS (2014a) and ACER (2014b).

long-term contracts. "A contractual relationship between two parties beyond a single transaction with a minimum duration usually of at least one year up to 20 years and longer. While single parts of a long term contract, like pricing provisions, may be changed over time under the rules of the contract, the contractual relationship between the parties will remain for the term of the contract" (ECS, 2007, p. 232).

national champion. Energy company, usually partially owned by the state, which, due to its strategic importance for the sector, is supposed to operate in the market, pursuing not only commercial, but also national goals.

take-or-pay. A clause of a long-term commodity contract that stipulates that the buyer should pay for an agreed amount of gas, irrespectively from whether this amount has been consumed.

Third Energy Package. The legislation package for gas and electricity markets, which consists of two Directives (for the internal market in gas—2009/73/EC—and for the internal market in electricity—2009/72/EC) and three Regulations (on conditions for access to the natural gas transmission networks—(EC) No 715/2009—on conditions for access to the network for cross-border exchange of electricity—(EC) No 714/2009 —and on the establishment of the Agency for the Cooperation of Energy Regulators ACER—(EC) No 713/2009). It was initiated by the European Commission in September 2007 and adopted in July 2009. It requires unbundling (the separation of the production and distribution assets of the EU's and third countries' vertically-integrated companies) and the obligatory Third Party Access to the infrastructure. Moreover, the principle of "reciprocity" allows access to foreign companies to the EU Internal Market (acquisition of the transmission and distribution assets), if these third countries offer similar access to the acquisition of the assets in their domestic energy production projects for the EU companies.

third party access. A right (mandatory TPA) or a possibility (negotiated TPA) of the third party to use a pipeline "for transportation and/or distribution purpose while paying a charge for such use to the owner /operator" (Energy Charter Secretariat 2007, 236).

unbundling. "Separation of production, transportation and distribution functions in a vertically-integrated company. Usually three types of unbundling are identified: ownership, operational and financial" (ECS, 2007, p. 236).

upstream. Production and excavation. "Technical, commercial and regulatory activities linked to the production sphere; the dividing line to downstream is usually the point of the first commercial transaction in the chain" (ECS, 2007, p. 236).

Appendix 3. Gas Prices, 1996–2013

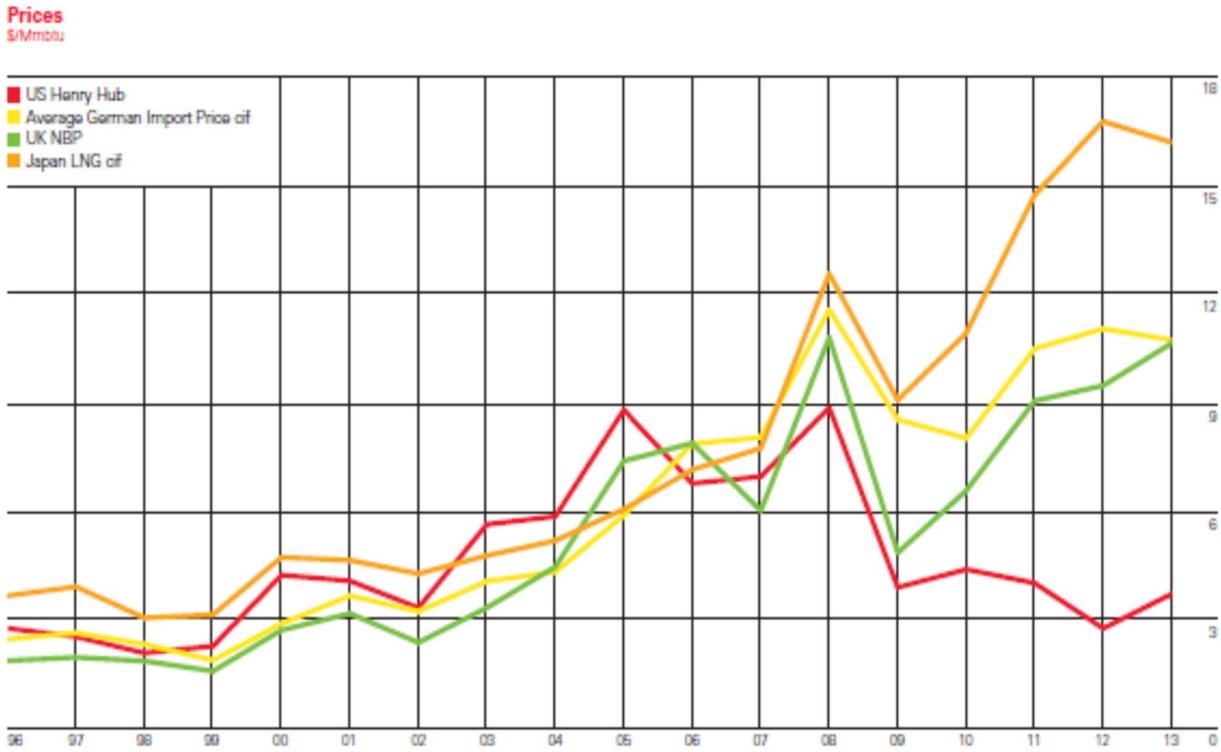
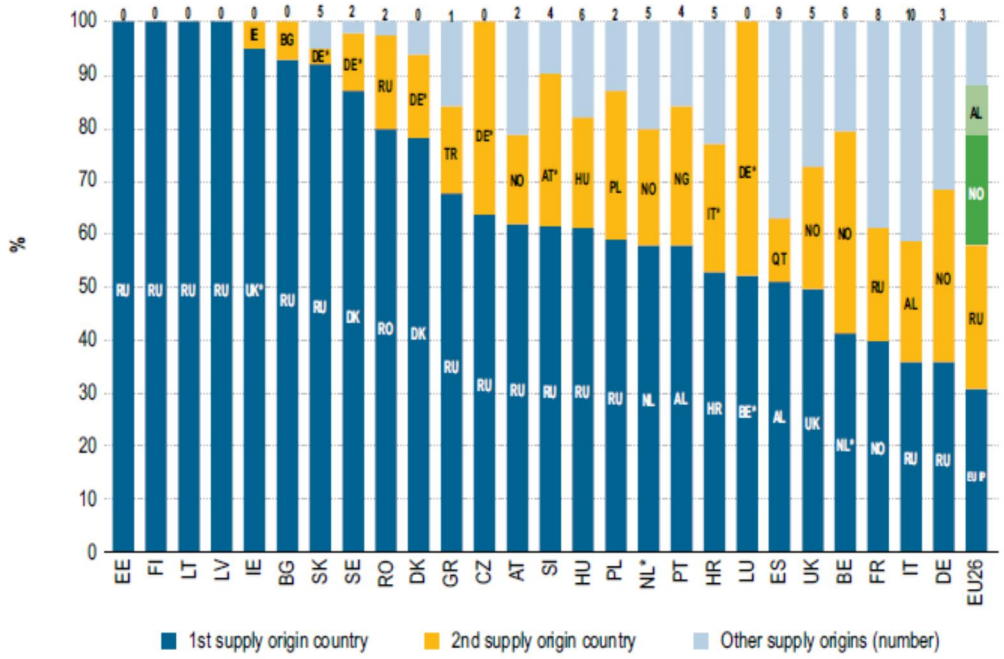


Figure 2. Gas Prices, $/Mbtu, 1996–2013

Source: BP Statistical Review of World Energy. June 2014, p. 27

Appendix 4. Estimated diversity of gas supply in EU– 26 per MSs and by origin of supply country – 2013, %



Source: Eurostat Comext, BP Statistical Report, Eurogas, MSs' National Reports (2014) and ACER calculations

Note: Supply origins indicate the upstream gas producer state or, in those origins marked with an asterisk, a MS featuring an organised market where gas has been purchased. The number at the top of the column relates to the total number of other different MSs declared as gas import origins in Eurostat Comext; again, either a gas-producing MS or MS with a gas market where gas has been purchased. The Netherlands split refers to the gas origins of overall traded volumes in the country, but the country constitutes itself as a net exporter even by solely considering its relevant indigenous production.

Figure 3. Estimated diversity of gas supply in EU– 26 per MSs and by origin of supply country – 2013, %

Source: ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2013, p. 170

Appendix 5. EU cross-border gas flows in 2013 and main variations from 2012 (bcm/year)

Figure 4. EU cross-border gas flows in 2013 and main variations from 2012 (bcm/year)

Source: ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2013, p. 189

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